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North Carolina Medical Journal

For Doctors and their Patients

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Ernest Craige, M.D.

The Halcyon Days of Youth, Part II:
The Second Year at the "New" UNC Medical School
John B. Graham, M.D.

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North Carolina Medical Journal

FOR DOCTORS AND THEIR PATIENTS

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Hepatitis C

A New Virus for an Old Disease

J. Gregory Fitz, M.D.

Fifteen years ago, Feinstone and coworkers[1] introduced the term "non-A, non-B" hepatitis to describe a characteristic clinical syndrome that developed in blood transfusion recipients that was not due to hepatitis A or B. From the beginning it was suspected that this was caused by a virus distinct from hepatitis A (HAV) and hepatitis B (HBV) on the basis of clinical and epidemiologic differences. Most importantly, prospective studies suggested that it was associated with a high risk of developing chronic liver disease with progression to cirrhosis.

During the last year, a new virus called hepatitis C (HCV) has been partially cloned and identified as the principal cause of non-A, non-B (NANB) hepatitis,[2] and a serologic test for detection of antibodies to HCV has been introduced.[3] These striking advances have led to a much better understanding of NANB hepatitis and have important implications for the detection and management of hepatitis in clinical practice.

Lessons from NANB Hepatitis

Prior to the identification of HCV, NANB hepatitis was functionally defined as acute or chronic hepatitis without serologic evidence for infection with HAV, HBV, or other pathogens; and without evidence for other causes of liver disease. The Centers for Disease Control estimates that this accounts for about 150,000 new cases of symptomatic hepatitis each year in the United States. Of these, approximately one-half (75,000) develop chronic liver disease, and about 15,000 progress to chronic active hepatitis or cirrhosis.[4-8] This represents 20% to 40% of the cases of acute viral hepatitis seen in this country, and contributes importantly to the large number of patients with cirrhosis, the ninth leading cause of death.

NANB hepatitis shares many clinical and epidemiologic features with hepatitis B, including parenteral transmission, the ability to cause chronic liver disease with progression to cirrhosis, and the presence of a large number of asymptomatic but infectious carriers who serve as the primary reservoir of the virus. In the United States, the carrier population appears to be several-fold greater than for hepatitis B.

Following blood transfusion, 5% to 10% of recipients develop NANB hepatitis. Although it has traditionally been considered a transfusion-associated disease, surveillance data from the Centers for Disease Control indicate that NANB hepatitis is more likely to occur outside of the transfusion setting, so that transfusions account for only 7,500 to 15,000 of the approximately 150,000 symptomatic cases seen annually.[4,6] Intravenous drug use, hemodialysis, and occupational exposure to blood are also important risk factors.

It should be emphasized that 20% to 40% of the cases of NANB hepatitis have no known source of exposure. The route of transmission—person-to-person contact, sexual transmission, or other vectors—is not clear, though the same hepatitis C virus appears to account for most of these cases. Evidence for[9] and against[10] sexual transmission has been presented, but the risk of infection through personal or sexual contact does not appear to be high.

The clinical features of acute NANB hepatitis are not readily distinguished for HAV or HBV, so diagnosis depends on appropriate serologic testing. In transfusion recipients, NANB hepatitis generally develops after an incubation period of four to 12 weeks. Most patients remain asymptomatic and are detected by an unexplained elevation of the aminotransferases (AST and ALT). When symptoms are present, they are nonspecific, with fatigue, nausea, and vomiting found in less than 25% and jaundice in less than 15%. As with hepatitis A and B, however, there is a broad range in clinical outcomes. Up to 20% of cases of fulminant hepatic failure are attributable to NANB hepatitis.

The real danger of NANB hepatitis is not the acute disease, which is commonly mild, but the risk of developing chronic liver disease, as summarized in figure 1. Sustained abnormalities of liver function tests occur in about 50% of those with NANB hepatitis as compared to about 10% of those with HBV infection. Of these, chronic active hepatitis is present in about 50%, and at least 20% develop cirrhosis over a relatively short follow-up period of five years.[4,5,7,8]

From the Division of Gastroenterology, Duke University Medical Center, Durham 27710.

The clinical progression from acute to chronic liver disease is often insidious and is under-recognized. Most patients are asymptomatic in the early stages, and liver function tests do not correlate with histologic progression. In the individual patient, waxing and waning of AST and ALT is characteristic,[8] and this is illustrated in a patient who developed NANB hepatitis following exposure to blood during cardiac bypass surgery (figure 2). It is not unusual to find normal or mildly abnormal values on one visit followed by elevation to 200 to 400 I.U. several months later. Two important consequences of this merit emphasis. First, serial measurement of ALT and AST does not always provide an accurate assessment of disease activity, so progression is not always heralded by sustained abnormalities of liver function tests. Second, many asymptomatic carriers are still infectious even though the liver function tests are normal or only mildly abnormal. The best evidence for this is that NANB hepatitis continues to occur in 5% to 10% of transfusion recipients even after elimination of donor units with elevated ALT. Hopefully, this will be reduced by screening for anti-HCV antibodies, but the risk will not be eliminated due to false negative tests.

The risk for an individual patient who receives a blood transfusion can be estimated on the basis of these studies.[4,5,7,8] For every 100 patients transfused, 5 to 10 will develop NANB hepatitis, and 2.5 to 5 of these will have persistent abnormalities of liver function tests, suggesting chronic liver disease. Within approximately five years of transfusion, 1.2 to 2.5 will have chronic active hepatitis and an additional 0.3 to .5 may progress to cirrhosis. The risks are presumed to be similar for NANB hepatitis acquired in other settings.

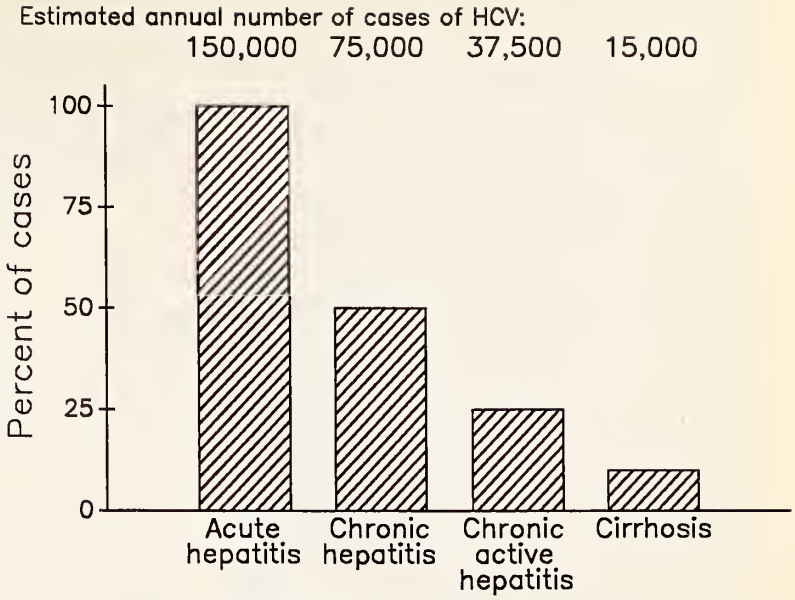


Figure 1. Estimates from the Centers for Disease Control and others indicate that there are approximately 150,000 new cases of symptomatic NANB hepatitis in the United States each year.[4,5,7,8] Most of these, as well as a larger number of asymptomatic unrecognized infections, are caused by hepatitis C virus. Acute infection is followed by chronic elevation of liver function tests in approximately half of the patients, and a significant portion of these will develop chronic active hepatitis and/or cirrhosis. Hepatitis C appears to account for 15,000 or more new cases of cirrhosis each year.

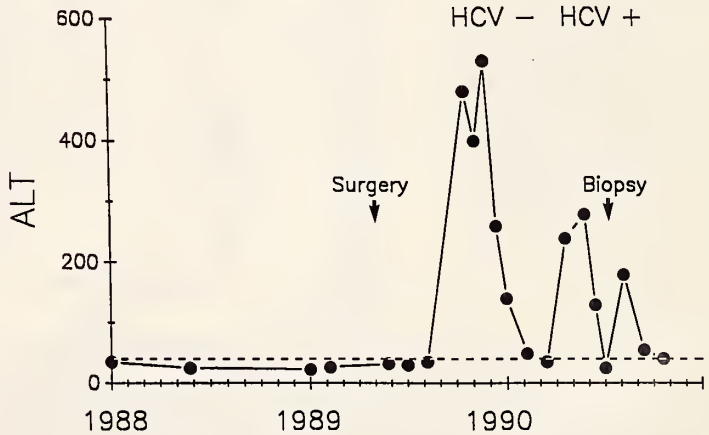


Figure 2. Time course of changes in ALT following acute infection with hepatitis C virus. Three months following exposure to blood during coronary artery bypass surgery, this patient developed acute hepatitis. Serologic studies showed no evidence of infection with hepatitis A, hepatitis B, or cytomegalovirus. However, there was seroconversion from anti-HCV antibody negative to positive approximately six months after infection. The patient continued to have fluctuations of ALT following the acute episode, with normal values on several occasions. A liver biopsy performed one year after infection showed chronic active hepatitis with cirrhosis.

Identification of the Hepatitis C Virus

The recognition that NANB hepatitis is a common and serious problem initiated a long and frustrating search for the responsible agent until Choo and coworkers[2] and Kuo and coworkers[3] adopted a different and elegant approach. They reasoned that other groups failed to detect the responsible virus because it was present in the serum in very low concentrations. Consequently, some type of gene amplification would be required. Plasma from a chimpanzee known to be infectious was used as a source of viral antigen. Since the investigators did not know whether this was a DNA or RNA virus they purified all of the DNA and RNA and synthesized more than 10^6 cDNA clones using reverse transcriptase and random primers. They then expressed peptides corresponding to the cDNA clones, hoping that one or more would represent a viral antigen.

Serum from a patient with chronic NANB hepatitis was presumed to have antibodies to the NANB agent and was used to screen these peptides. After screening one million clones, one was isolated which did not hybridize to DNA from uninfected human or chimpanzee liver indicating that it was not derived from the host genome. Ultimately the investigators were able to identify this as a partial sequence of single stranded RNA that originated from a virus. This was unrelated to the hepatitis A and B viruses, but shared some characteristics with the togavirus and flavivirus families. Thus, the use of

these powerful techniques enabled the investigators to clone the hepatitis C virus with no prior knowledge of the infectious agent. The same approach promises to be of great benefit in other elusive infectious diseases.

These investigators[3] also generated a fusion peptide containing 363 amino acids from the viral sequence. This was used as an antigen to capture circulating anti-HCV antibodies, representing the first assay for serologic screening for the hepatitis C virus. Several approaches were used to validate the specificity of this antibody. First, circulating anti-HCV antibodies were detected in the serum of six of seven chimpanzees known to have NANB hepatitis. Antibodies were not present in control sera from uninfected animals. Second, sera from 10 patients with well characterized post-transfusion NANB hepatitis were evaluated. Each of the 10 patients seroconverted from anti-HCV negative to anti-HCV positive during the 12 months after blood transfusion. In addition, retrospective screening of the donor units revealed that nine of 10 had received at least one unit that tested positive for anti-HCV antibodies. Antibodies were also detected in serum from 58% of patients with community-acquired NANB hepatitis, suggesting that the same agent is responsible for most cases.

Finally, when asymptomatic blood donors from several countries were screened to determine the prevalence of anti-HCV antibody, it was found in only 0.5% of those at low risk for transmitting NANB (normal ALT, negative hepatitis B core antibody), but in 44% of those at high risk for transmitting the disease (elevated ALT, positive hepatitis B core antibody). Thus, blood donors with anti-HCV antibodies represent a high-risk group for transmitting NANB hepatitis; and most transfusion recipients that develop NANB hepatitis seroconvert from anti-HCV antibody negative to positive.

Significance of anti-HCV Antibodies

Widespread application of the serologic test for circulating anti-HCV antibodies has demonstrated that hepatitis C is worldwide in distribution, and provides compelling evidence that it is responsible for most cases of NANB hepatitis in patients with and without a parenteral exposure history.[11,12] In patients with a firm clinical diagnosis of post-transfusion NANB hepatitis, at least 80% are anti-HCV positive.[13] Similarly, a high frequency of seropositivity is found in hemophilia patients ,[14] hemodialysis patients, and intravenous drug abusers.[11] NANB hepatitis occurring in the absence of parenteral exposure is also associated with anti-HCV antibodies, and there is a similar risk for developing chronic liver disease.[4,12]

In addition to the well documented risk for chronic liver disease and cirrhosis, chronic infection with HCV may also be a risk factor for hepatocellular carcinoma.[15-17] This is analogous to the well established role of chronic HBV infection in the pathogenesis of hepatocellular carcinoma. One study from Italy suggests that HCV may be more important numerically than HBV.[17] The mechanisms and significance of this association remain to be clarified.

The current antibody test represents a remarkable achievement, but several qualifications regarding its interpretation merit emphasis. First, and most importantly, a positive anti-HCV antibody test does not indicate resolution of the viral infection. Patients with anti-HCV antibodies are capable of transmitting the disease and should be considered infectious. There are presumably gradations of infectivity, and those with elevated ALT are more infectious than those with normal ALT.[18] Unfortunately, there are occasional false positive tests—patients who test positive for anti-HCV antibodies who do not have infection with hepatitis C virus. This has been best defined in autoimmune chronic liver disease in which the false positivity appears related to hypergammaglobulinemia (reviewed by Martin[19]). At present, distinction between true positive and false positive tests requires use of more sensitive assays including recombinant immunoblot or detection of HCV RNA by polymerase chain reaction. These tests are not available outside of specialized research facilities. From a pragmatic standpoint, since the incidence of false positive tests appears relatively small, patients who test positive should be considered to be infectious.

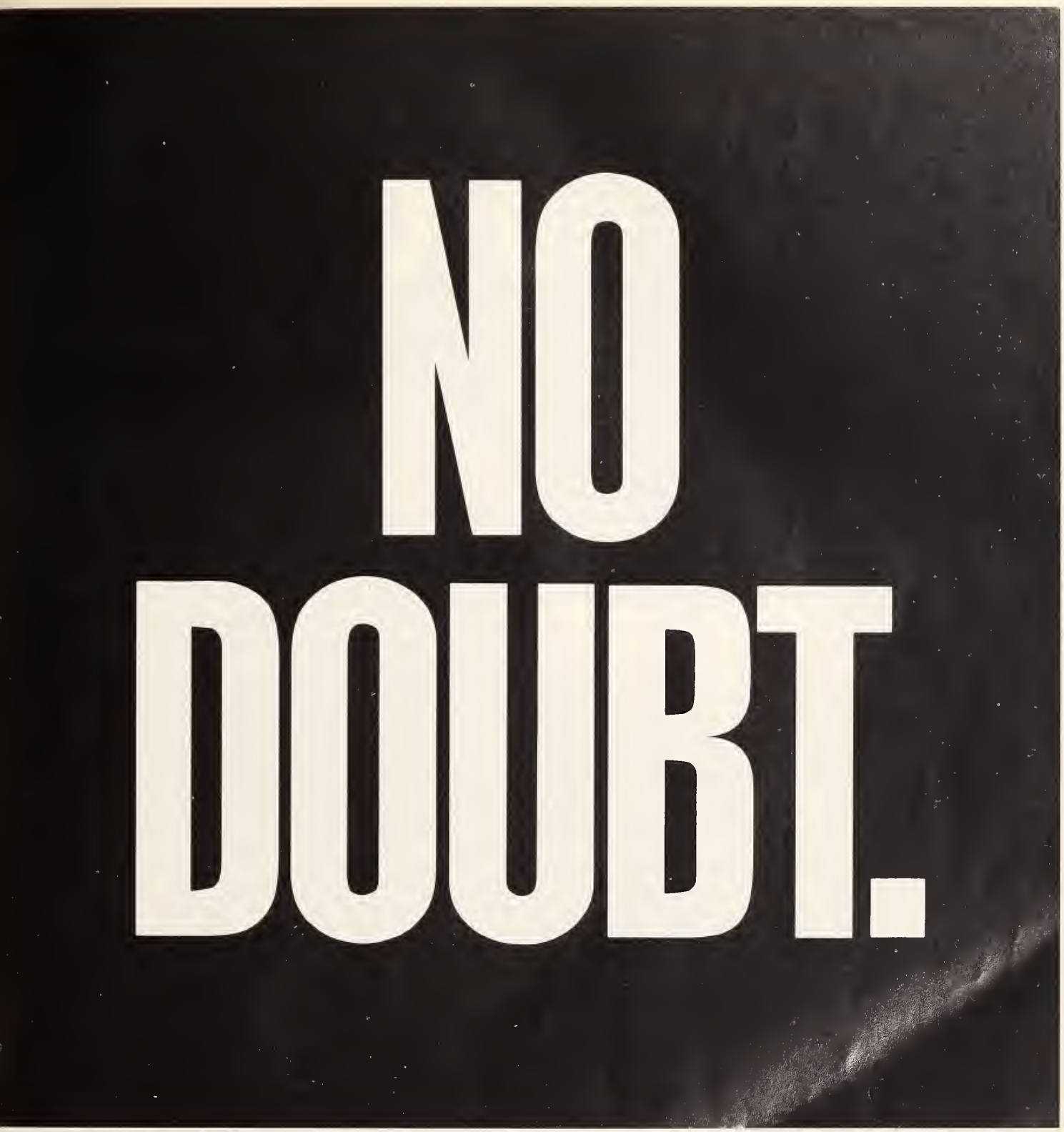
False negative tests also occur. Even with repeated testing, up to 20% of patients who clinically have NANB hepatitis will not develop anti-HCV antibodies. In some of these patients, HCV RNA can be detected by more sensitive polymerase chain reaction.[20] It is highly likely that those who do not have HCV RNA or anti-HCV antibodies are infected with another virus ("non-A, non-B, non-C"). In any case, present findings suggest that the current anti-HCV assay underestimates the true incidence of the disease.

A final caveat is that it often takes three to six months for anti-HCV antibodies to develop. In the post-transfusion setting, anti-HCV antibodies were detectable after a mean of 22 weeks following exposure, or about 15 weeks following the onset of illness.[13] Occasional patients require up to a year for seroconversion. Thus, repeated testing over a six- to 12-month period may be required for detection of antibodies, or before hepatitis C can be excluded.

Treatment of HCV

The recognition that hepatitis C virus is a major cause of chronic active hepatitis and cirrhosis has resulted in several therapeutic trials. Neither acyclovir nor corticosteroids have been effective. Recently, however, there have been several encouraging trials using recombinant alpha interferon.[5,21] In patients with well documented chronic disease, treatment with two to three million units three times a week for six months resulted in improvement of the ALT and histologic features in more than half. Improvement was uncommon in well matched control patients who did not receive interferon. Unfortunately, relapse within six months of cessation of therapy occurred in many of these patients. Given the cost, potential toxicity, and high incidence of relapse, future controlled studies to optimize the use of interferon and evaluate

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other treatment options are clearly warranted. Use of interferon therapy for hepatitis C should generally be limited to controlled clinical trials.

There are few studies of the outcome of liver transplantation following liver failure related to HCV. However, there is no clear evidence of recurrent severe infection in transplanted liver. This is in contrast to hepatitis B, where there is a high incidence of recurrent infection often with a rapidly progressive course. Until further studies are available, hepatitis C should not be considered a contraindication to transplantation.

Postexposure prophylaxis with immune globulin (gamma globulin) has been 80% to 90% effective in preventing transmission of HBV if given within two weeks of exposure.[6] By analogy, it seems likely that immune globulin may also contain antibodies that prevent transmission of HCV following blood transfusion, needle-stick exposure, or other accidental parenteral contact. There have been few clinical trials, and the results do not allow firm conclusions. However, immune globulin is safe, and current guidelines from the Centers for Disease Control indicate that it is reasonable to administer immune globulin following accidental percutaneous exposure to blood from a patient with NANB hepatitis.[6] There is insufficient information to make specific recommendations in other situations.

Conclusions

Research and clinical advances regarding hepatitis C virus have occurred at a rapid rate over the last 18 months. These have clearly established hepatitis C as a major cause of acute hepatitis, chronic hepatitis, and cirrhosis. Widespread adoption of screening practices for HCV in blood donors represents a significant advance in control of this disease. However, hepatitis C will continue to be common as the majority of patients do not acquire the disease through transfusion, and the effectiveness of donor screening programs is limited by false negative results with the current anti-HCV antibody test.

The advances have highlighted additional areas for study. The development of more sophisticated serologic studies with improved sensitivity and specificity, as well as probes to measure viral replication in the liver, are very high priorities. This should allow for more accurate distinction between patients with self-limited or non-progressive disease and those with a more aggressive clinical course. The principal aims for the near future will be to develop an effective vaccine to limit transmission of this common disease, identify infected patients at risk for progression, and develop more effective treatments for those who have already acquired the virus. ❑

Acknowledgments

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Editor's note

This is the Editor's second visit with the Fitz family. The GI Bill and Fran Fitz put Tom Fitz through Duke Medical School. Fran Fitz established, in the office of the Department of Medicine, a standard for executive secretaries equalled only by Bess Cebe.

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SCIENTIFIC ARTICLE

All That Wheezes Is Not Asthma

Frederick H. Taylor, M.D., Richard W. Zollinger II, M.D., Scott A. Kremers, M.D.,
Arthur R. Cohen, M.D., Vittal B. Shenoy, M.D.

Chavalier Jackson brought attention to the phonomenon described in the title of this paper when in 1918 he pointed out the importance of the "asthmatoid wheezes" in the diagnosis of foreign bodies in the tracheo-bronchial tree.[1] He later added that wheezing may indicate other forms of partial airway occlusion,[2] such as neoplasms, inflammatory strictures and external compression of the airway. Jackson described the wheeze as being best heard with the examiner's ear next to the open mouth of the patient during a forced expiration.

Jackson stated that a wheeze is "present at some stage in practically every progressive obstructive bronchopulmonary disease." He further added, "One of the most urgent calls for immediate diagnostic bronchoscopy is a wheeze heard at the open mouth. Every medical student should be taught that no physical examination of the patient is complete without listening at the patient's open mouth for a wheezing sound and recording it negatively or positively."[2]

This paper documents two examples of the importance of "The Wheeze" in evaluating patients.

Patient I

J.M.A., a 60-year-old white man, was admitted to Mercy Hospital June 8, 1986 complaining of wheezing for the duration of one year. He noted that when he extended his neck, his voice was croupy and his breathing raspy. He also developed dysphagia, occasional regurgitation and a 20-pound weight loss. He consulted an otolaryngologist who obtained a chest x-ray and Computed Axial Tomographic (CAT) scan of the chest and referred him for surgical consultation.

He was a healthy-looking man who upon neck extension revealed an expiratory wheeze and a rasping sound of his voice. Examination of his neck revealed no thyroid enlargement or other cervical masses. The remainder of his physical examination was normal.

Posterior-anterior and lateral chest x-rays (figure 1 A-B) showed a 7 cm superior mediastinal mass which displaced the trachea anteriorly. CAT scan of the chest (figure 2) demonstrated a mediastinal mass in the posterior-superior mediastinum compressing the trachea and esophagus. The differential diagnoses included lymphoma, duplication cyst of the esophagus, neuro-enteric cyst, leiomyoma of the esophagus, or, less likely, substernal goiter.

On June 9, 1986 the patient was taken to the operating room and administered general endo-tracheal anesthesia. Preliminary bronchoscopy and esophagoscopy showed marked slit-like compression of the trachea and esophagus. The patient was turned onto his left side and the right chest was opened through a postero-lateral thoracotomy going through the fourth intercostal space. Exploration revealed a soft, cystic mass in the upper mediastinum posterior to the trachea and esophagus and compressing both structures. The overlying mediastinal pleura was incised and the mass was easily mobilized by finger dissection up to its pedicle which extended into the neck. The mass itself retracted up into the neck, therefore, the pedicle was approached through a separate neck incision. The thoracotomy wound was closed with underwater seal drainage and the patient was placed on his back. A large bulging mass was now apparent in the area of the left lobe of the thyroid.

The neck was opened through a Kocher incision and the strap muscles retracted laterally. The tumor was lifted out of the mediastinum. A very small pedicle was attached to the left lobe of the thyroid. This was divided and the tumor delivered from the wound. On palpating the bed of the tumor, it was obvious that the mass had migrated from the left lobe of the thyroid behind the esophagus and trachea and into the right upper posterior mediastinum. The neck was closed leaving a small Penrose drain in place. The patient had an uneventful course and was discharged on the sixth postoperative day.

Pathologic examination showed a 7.5 cm, 65 gram cystic, hemorrhagic mass, which on microscopic examination was a benign colloid goiter.

From the Departments of Thoracic Surgery, Pulmonology and Surgical Pathology, Mercy and Presbyterian Hospitals, Charlotte.



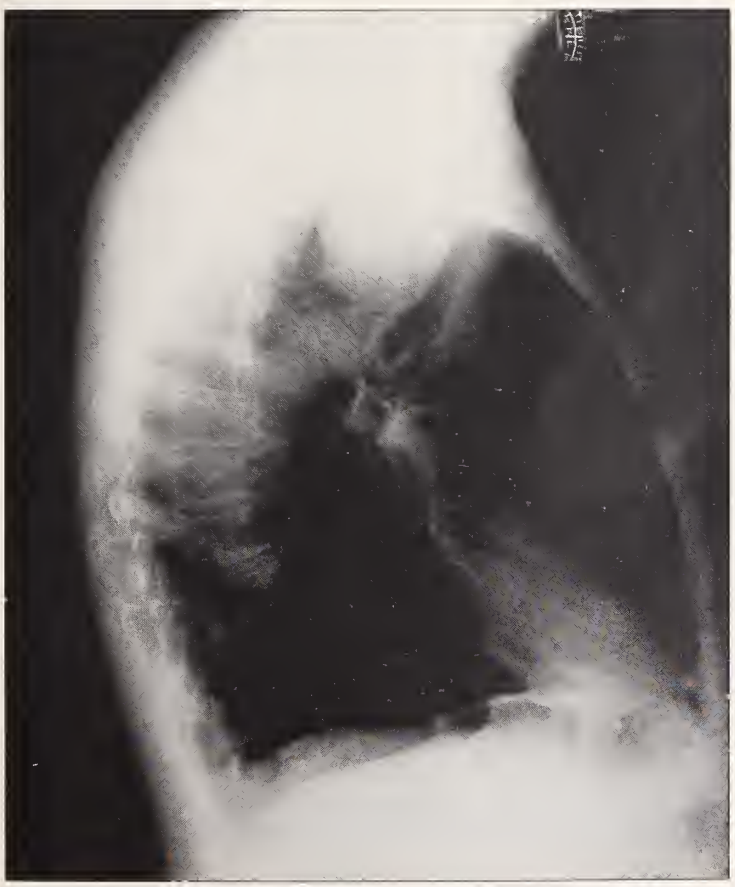


Figure 1A, 1B. Case 1: Posterior-anterior and lateral chest x-rays demonstrate the upper mediastinal tumor.

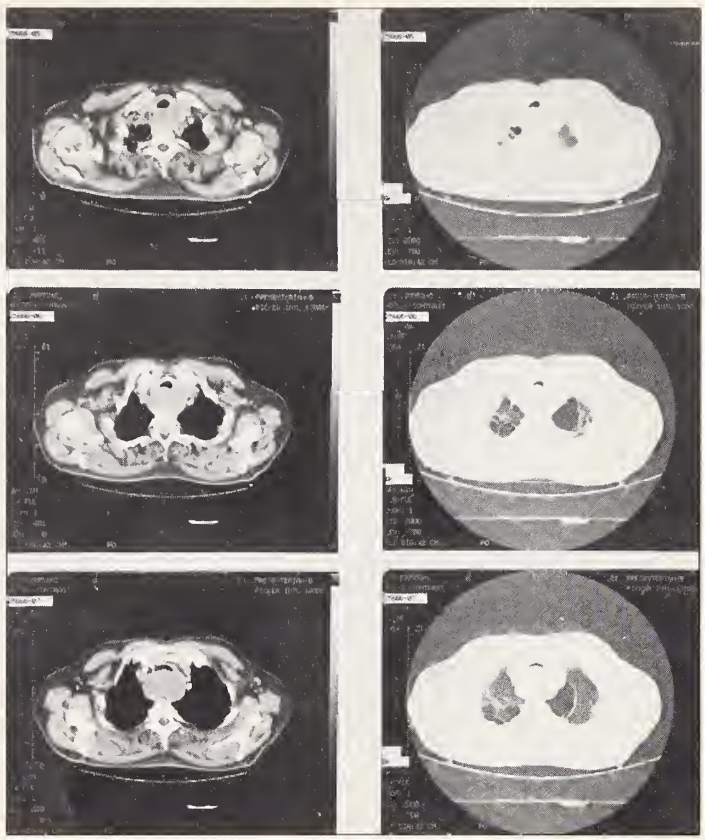


Figure 2. Case 1: CT scan of chest demonstrates the posterior mediastinal tumor with severe compression of the trachea.

Patient II

C.M., a 23-year-old black man, was admitted to Presbyterian Hospital. He had had intermittent hemoptysis, expiratory dyspnea and wheeze for 18 months. He noted no difficulty upon inhalation; however, he complained of occasional labored exhalation. He was treated originally with cough medicine, but one month prior to admission he saw a pulmonologist who bronchoscoped him and ordered a CAT scan of his chest. A biopsy was taken but there was insufficient tissue for diagnosis. He was referred to another pulmonologist who rebronchoscoped him and found what he described as a 40% occlusive pedunculated mass in the patient's cervical trachea. Biopsy showed a muco-epidermoid carcinoma. He was referred to us for surgical resection.

He was a lean, muscular, healthy-looking young man. No wheeze was audible on the initial examination, but a wheeze was heard on several subsequent occasions.

Posterior-anterior chest x-ray showed a round endotracheal tumor at the suprasternal notch. CAT scan (figure 3, next page) of the neck revealed a mass in the cervical trachea with marked impingement of the airway.

Under topical 1% Pontocaine anesthesia a flexible fiberoptic bronchoscope was passed transorally. A pedunculated, pink, ulcerated tumor was found in the cervical trachea (figure

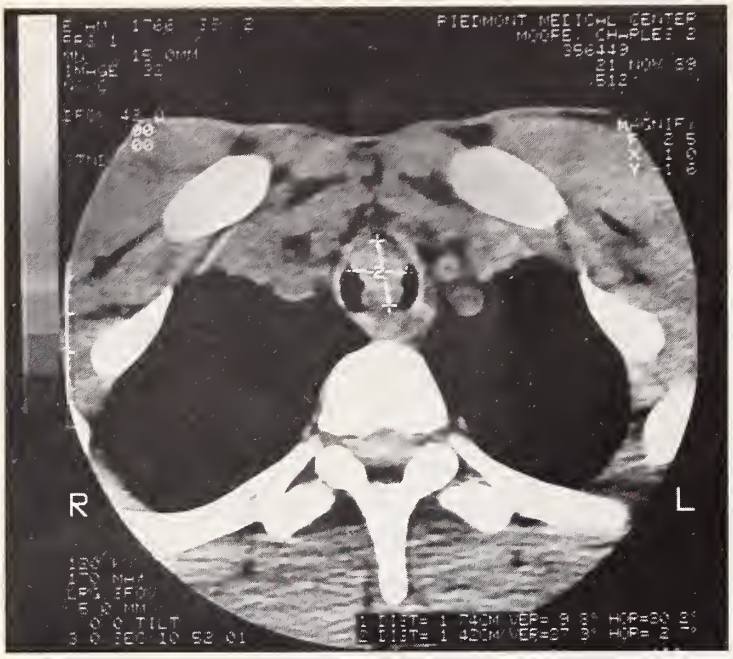


Figure 3. Case 2: CT scan of neck shows severe airway encroachment by endotracheal tumor.



Figure 4. Case 2: Bronchoscopic view of endotracheal tumor.

4). The bronchoscope passed the tumor and the distal trachobronchial tree was normal. Flexible fiberoptic esophagoscopy was normal.

The endotracheal tube was then threaded down over the flexible bronchoscope and passed beyond the tumor without difficulty. General anesthesia was achieved and his neck approached with a Kocher incision. A longitudinal incision was extended a short distance over the upper sternum and the sternum divided with the saw to just beyond the angle of Louis. The sternum and strap muscles were then retracted and the trachea was mobilized and looped with umbilical tapes. We then passed the pediatric flexible bronchoscope down the endotracheal tube and the bronchoscopic light trans-illuminated the tumor precisely showing the margins of the tumor. Two stay sutures of 2-0 Dexon were placed antero-laterally in the trachea distal to the tumor. The trachea was divided halfway, just distal to the tumor. The endotracheal tube was withdrawn proximal to the tumor, but remained distal to the vocal cords. A sterile endotracheal tube was passed through the partially divided trachea distally and connected to the ventilator. A sleeve resection of the trachea was carried out and frozen sections showed both margins to be free of tumor. The trachea was anastamosed with interrupted 4-0 Dexon sutures. After the posterior row of sutures was completed, the sterile endotracheal tube was removed. The per oral endotracheal tube was passed into the distal trachea and the suture line was completed. The suture line was then covered with a pedicle of strap muscle to separate it from the adjacent innominate artery. The wound was closed in layers. Two #2 nylon sutures were placed between the chin and anterior chest wall to keep the neck flexed and tension off the suture line.

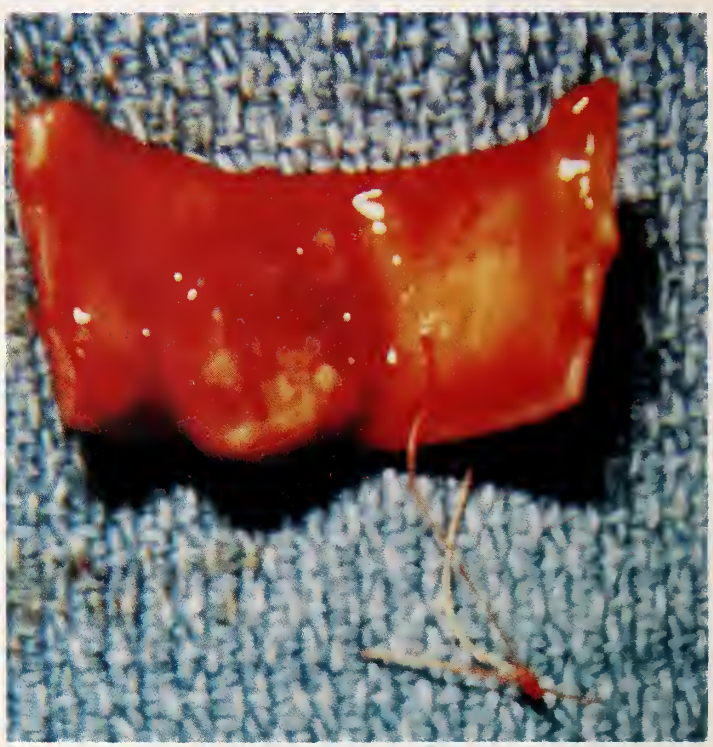


Figure 5. Case 2: Surgical specimen of sleeve resection of trachea. The suture marks the superior margin of the trachea. The pedunculated tumor involved neither surgical margin.

Pathologic examination revealed a 1 cm x 1 cm pedunculated mass arising from the tracheal mucosa. The surgical margins were free (figure 5). Microscopy examination revealed muco-epidermoid carcinoma.

continued on page 14

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The patient was febrile postoperatively, but at no time was crepitus felt in his neck. On the fifth postoperative day he developed a left hydro-pneumothorax. No air was seen in the neck or mediastinum. A tube was inserted in his left chest for removal of air and serous fluid. There was no further air leak. He continued to have fever and bronchoscopy on the seventh postoperative day showed the tracheal suture line was intact. We explored his neck and sterile, liquid blood was encountered; however, there was no obvious leak from the suture line. On the eighth postoperative day, x-ray showed a "white out" of the left thorax. Thoracentesis yielded only 200 cm^3 of sterile serous fluid. The "white out" remained on the left side, and on the tenth postoperative day a left pulmonary decortication was carried out. Fibrinous material was removed and the lung expanded. Bronchial secretions required several more bronchoscopic cleanouts of the left lower lobe following which his lung remained clear and well expanded. When the heavy nylon sutures between the chin and anterior chest wall were removed, the patient was able to cough more effectively. He was discharged on his eighteenth postoperative day.

Postoperative recovery was then quite rapid. He returned to work and his chest x-ray was clear two months later.

Discussion

These two illustrative cases show the diagnostic importance of wheezing. The authors, in agreement with Jackson, contend that diagnostic bronchoscopy is strongly indicated in any patient with an unexplained wheeze.

Patient I illustrates an unusual manifestation of goiter. Goiters may extend substernally and are almost always easily removed from the neck. In 1949 Sweet[3] reported six cases of goiter located in the posterior mediastinum. All were benign, although two had had irradiation therapy to the mediastinum. Herlitzka and Gale[4] reported that of 174 mediastinal tumors that they resected, 10 were goiters (5.7%), one of which was malignant. Sampson and Dugan reported 54 cases of resected mediastinal tumors, four of which were goiters.[5] They emphasized the importance of surgical removal of primary mediastinal tumors over "watchful waiting" or lesser procedures, such as needle biopsy or thoracoscopy. They deplored the "trial of x-ray therapy" for undiagnosed mediastinal tumor. A 20-year experience with surgical treatment of 1,064 cases of mediastinal tumors at the Mayo Clinic[6] included 56 intrathoracic goiters (5.3%); all of which required thoracotomy. These authors also said that most substernal goiters can be removed from the neck. Ellis, et al.[7] reported on 24 cases of intrathoracic goiters, 12 of which had symptoms of pressure including recumbent dyspnea, wheezing and dysphagia. Radioactive iodine was helpful in the diagnosis of two cases. Fourteen of these goiters lay in the posterior mediastinum; only one was malignant. Lindskog and Malm[8] reported that a Valsalva maneuver at times would displace a mediastinal tumor upward, making it palpable.

The largest series of tracheal tumors were reported by Grillo, et al.,[9-12] Perlman,[13] and Pearson, et al.[14] These authors found the most common primary tracheal tumor to be squamous cell cancer followed by adenoid cystic carcinoma. Wheezes and stridor were important symptoms in these series.

Wheeze is an important symptom and indicates partial tracho-bronchial occlusive disease. One must never conclude that patients with unexplained wheeze are asthmatic unless a definite diagnosis is established. Bronchoscopy is indicated where an unexplained wheeze persists. Chest x-ray and CAT scan of the neck and chest are helpful diagnostic aids. ❑

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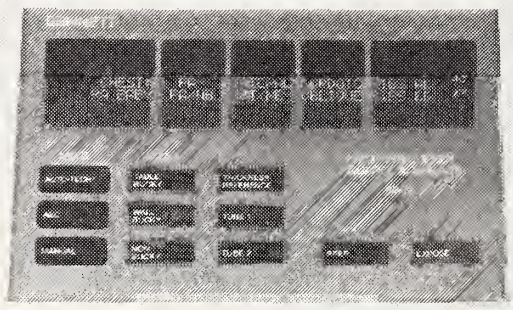
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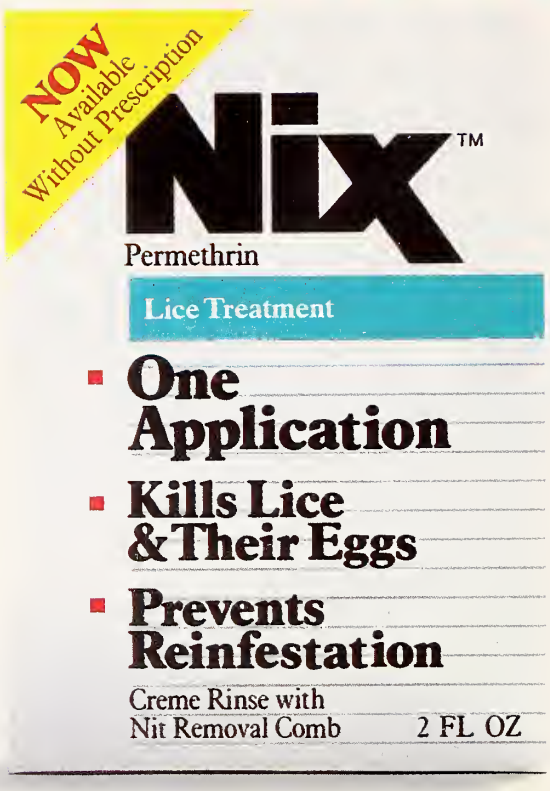
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SCIENTIFIC ARTICLE

A Case of Leukemia Due to HTLV-1

A Virus of Regional Significance

Evelyne M. Davidson, M.D., Peter C. Ungaro, M.D.

Adult T-cell leukemia caused by the retrovirus HTLV-1 is encountered with increasing frequency in the southeastern United States. A recent report indicated that only two patients with this virus had been identified in North Carolina.[1] The causative retrovirus is similar to the human immunodeficiency virus (HIV) responsible for the human immunodeficiency syndrome (AIDS). However, the detection of this virus requires identification of antibody different from that associated with HIV, and the clinical manifestations of infection are very different from those of patients with AIDS. This oncogenic virus causes malignant transformation of infected T-cells, resulting in an aggressive leukemia associated with lymphadenopathy, hepatosplenomegaly, skin involvement, and hypercalcemia.[2] This report describes a patient with typical manifestations of the disease. This is the first patient with HTLV-1 virus definitely identified here in Wilmington, NC.

The patient was a 33-year-old black woman who presented with nausea and vomiting of two days' duration, a painful ulcerated lesion in her pubic area that she first noted two weeks previously, and an erythematous papular eruption that had been present for six months. The eruption began on her arms and then spread to her trunk and legs. The rash had been thought to represent an atypical lichen planus and had partially responded to treatment with topical steroids. Previous medical care included a Cesarean section 14 years ago and hospitalization for treatment of a Klebsiella urinary tract infection four weeks previously. The patient did not remember any blood transfusions and denied illicit use of drugs. She was born in North Carolina and had never traveled out of the state. She had been sexually active in her younger years, but denied multiple partners.

Physical examination was remarkable for an erythematous macular rash on the arms, trunk and legs. There was cervical, axillary submandibular, and inguinal lymphadenopathy. The abdomen was obese, and hepatosplenomegaly was not detectable. The external genitalia manifested a 1.5 cm ulcerated lesion on the mons pubis in the midline.

Laboratory studies included a WBC count of 40,000 with 70% lymphocytes, many of the lymphocytes being atypical and convoluted. The hemoglobin and platelet count were normal. The urea nitrogen was 75 mg% and the creatinine was 4.8 mg%. The calcium was 13.1 mg% with an albumin of 3.7 gm%. Bone marrow aspirate and biopsy revealed erythroid hyperplasia with only small numbers of the atypical lymphocytes that had been identified on peripheral smear. Chest x-ray and abdominal films were normal, and a skeletal survey detected no abnormalities. Computed tomographic scans of the chest and abdomen confirmed the axillary adenopathy and demonstrated mesenteric and pelvic lymphadenopathy. There was a 4 cm mass in the head of the pancreas and prominent splenomegaly.

On the third hospital day the patient complained of shortness of breath, and diffuse pulmonary rales and wheezes were detected on physical examination. Pulmonary infiltrates were apparent on repeat chest x-ray, and antibiotic therapy consisting of cefotaxime and gentamycin was started. Gram negative rods identified on blood culture were found to be Klebsiella pneumoniae. Respiratory compromise progressed and intubation with mechanical ventilation was required. Continued deterioration and development of hypotension required initiation of pressor therapy, and the patient died on the thirteenth hospital day.

An autopsy was performed. Infiltration of the skin, spleen, and lymph nodes with atypical convoluted lymphocytes was demonstrated. Other findings included adult respiratory distress syndrome and acute renal tubular necrosis. An antibody titer to HTLV-1 was found to be 4.3 by enzyme immunoassay (normal less than 1.0).

Discussion

Adult T-cell leukemia/lymphoma (ATLL) is found most frequently in southwest Japan. A high incidence has also been detected in central Africa and certain Caribbean islands such

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as Jamaica. In the United States the disease has been found predominantly among young blacks in the southeast.

Exposure to the oncogenic retrovirus responsible for this malignancy has been shown to occur with some frequency in the United States. Blood donor surveys carried out by the American Red Cross have shown a seropositivity rate of 20 per 100,000.[3] It is not clear why some individuals infected with the virus become ill and others do not.

Like HIV, HTLV-1 attacks the central nervous system. It causes a chronic progressive paraparesis known as tropical spastic paraparesis. However, it is extremely rare for patients with ATLL to develop spastic paraparesis or for patients with paraparesis to develop ATLL.4 The expression of the disease would seem to be determined by host factors such as HLA haplotype.

The onset of ATLL is most frequently characterized by the rapid development of skin lesions, as was the case in our patient. Skin lesions can range from tumor nodules to nonspecific erythematous patches.[2] Hypercalcemia is frequent and apparently related to osteoclast activation and accelerated bone turnover. Sometimes x-rays show lytic bone lesions. Diffuse lymphadenopathy is typical, but mediastinal masses are not a feature of the disease. The patients are susceptible to opportunistic infections, and infectious complications are frequently the cause of death. Although the clinical course is generally fulminant, as was the case in our patient, indolent courses have been described.

One of the most interesting features of the disease is the circulating convoluted lobulated lymphocyte found in the peripheral blood[2] (figure 1). These T-cells are infected with virus, and their identification is essential in establishing the diagnosis. These cells infiltrate the skin, the lymph nodes, the bone marrow, and other organs producing the characteristic manifestations of the disease. They probably release a humoral factor responsible for bone resorption and hypercalcemia.

Serologic detection of antibody to HTLV-1 is also important, but there are many asymptomatic carriers of the infection in the population.[3] It would have been interesting to know the serologic status of the relatives of our patient, but they would not agree to testing. There is evidence to suggest that the virus can be transmitted from mother to child transplacentally or by breast feeding. The virus then remains dormant in the host, sometimes only causing disease many decades after infection. Other modes of transmission are similar to that for AIDS. Blood transfusion, illicit intravenous drug administration, and sexual contact have all been implicated.

Our patient did not remember blood transfusion, but she was not certain that she was not transfused at the time of her cesarean section. Blood is now being tested for antibody to HTLV-1, but this was started only recently, and this virus may remain dormant in its host for long periods of time. A closely related virus, HTLV-2, is also present in the blood supply and seems capable of causing human disease. Some have even postulated that multiple sclerosis may be due to this or similar agents.[3] There may be reason for concern about this and other as yet unrecognized threats in the blood supply. ❑

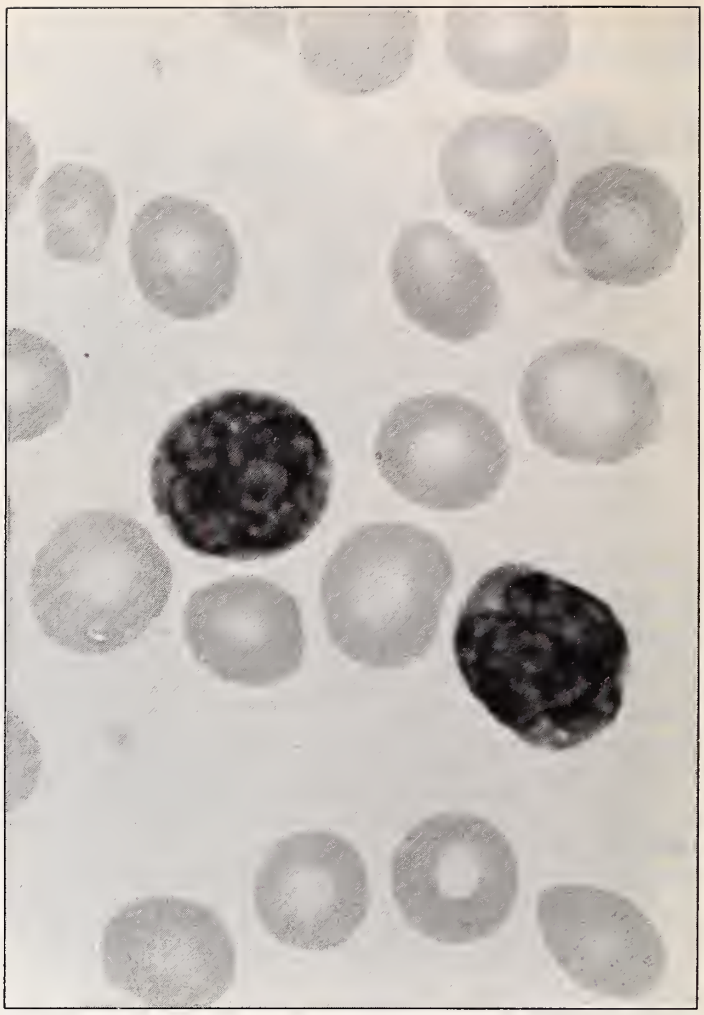


Figure 1. Abnormal lymphocytes found in the peripheral blood of this patient. (Photograph provided by Dr. Rebecca McAfee, Department of Pathology, New Hanover Memorial Hospital.)

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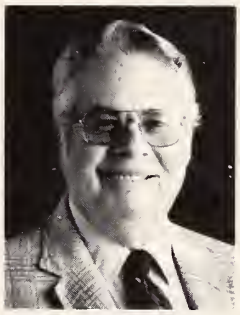
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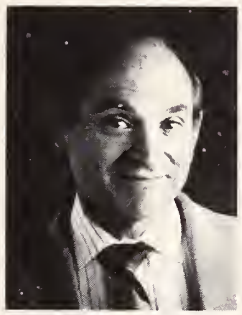
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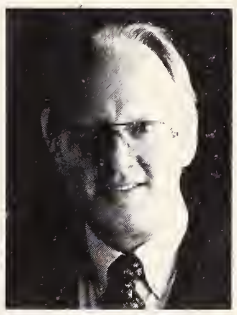
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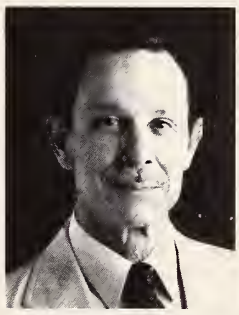

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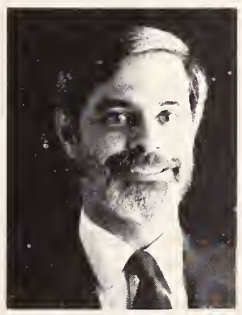

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Physicians and Nuclear War

Daniel T. Young, M.D.

The Beginning: Hiroshima and Nagasaki

The few physicians who survived the bombings of Hiroshima and Nagasaki faced an insurmountable medical catastrophe. They were helpless to do anything significant for the injured, burned and irradiated survivors.[1] As Dr. Hachiya shows, even with a relatively intact "outside" world, help was slow in coming and not very effective.

Direct involvement with the medical consequences of nuclear war began with those physicians. Within a few months the first of many Japanese and American medical teams—in addition to those who came to try to treat the injured—began to organize to study long-term survivors. The Atomic Bomb Casualty Commission was started by late 1946. It began the extensive studies that have continued to date under the auspices (since 1975) of the Radiation Effects Research Foundation, an international medical research group. This research up to 1981 is summarized in detail in book form.[2] A much less detailed update can be found in a publication of the Institute of Medicine of the National Academy of Sciences.[3]

While he worked with the Atomic Bomb Casualty Commission in 1950 to 1953, Dr. Warner Wells became acquainted with Dr. Hachiya and learned of the diary he had kept as he recovered from his own wounds in the shattered remains of the hospital he directed in Hiroshima. Together they translated the diary into English. Dr. Wells was on the surgical faculty at the university of North Carolina when the translation was published by the University of North Carolina Press in 1955.[1] Like many others he was deeply affected by his experience in Hiroshima. His Humanities Lecture at the university in 1959 was entitled: Our Technological Dilemma, or an Appraisal of Man as a Species Bent on Self-Destruction. In conclusion he observed: "Man has achieved the capacity to destroy himself as a species ... A realistic appreciation of this concept leaves no alternative conclusion than that civil, national, or world defense must hereinafter be a matter of Inspired Statesmanship." He said: "To one who takes an increasingly detached view towards the ultimate fate of this species, sadness prevails."[4]

Dr. Young is the President of Physicians for Social Responsibility, and Professor of Medicine, Emeritus, The University of North Carolina at Chapel Hill.

The Founding of Physicians for Social Responsibility and International Physicians for the Prevention of Nuclear War

By 1959 there were many other physicians, who, looking about themselves, found little evidence of inspired statesmanship. Nuclear weapons testing was filling the atmosphere with radionuclides. In response to the cold war an unrestrained nuclear arms race was plunging blindly ahead. If the conditions predicted by President Eisenhower in 1956 were not already present, they soon would be. President Eisenhower wrote: "When we get to the point, as we one day will, that both sides know that in any outbreak of general hostilities, regardless of the element of surprise, the destruction will be both reciprocal and complete, possibly we will have the sense to meet at the conference table with the understanding that the era of armaments has ended and the human race will have to conform itself to this truth or die."[5]

In 1960, then, a group of these physicians formed Physicians for Social Responsibility (PSR), an organization that would devote itself to studying the medical consequences of nuclear war and to communicating them in a manner the public and members of the government could understand.

PSR began by publishing a series of special articles in the *New England Journal of Medicine*.[6] There were several simple conclusions drawn from the data published there:

1 Organized society could not survive a major nuclear war.
2 The myriad injured survivors of nuclear attack would find the medical establishment largely destroyed and unable to help them significantly.
3 No imaginable system of civil defense could make a significant difference to the outcome of nuclear war.

4 Nuclear war should be seen as a "final epidemic" for which no treatment is available except prevention; therefore physicians should be active in preventing nuclear war as a part of their professional responsibility.

At about the same time, responding to fear of radionuclide fallout from weapons testing, PSR collected the deciduous teeth of children from the United States and demonstrated that Strontium 90, an alpha emitter, was being incorporated in them. These data contributed to the pressures that led President Kennedy to push for the Limited Test Ban Treaty of 1963, which stopped nuclear explosions in the atmosphere and under the oceans.

The accelerating arms race after about 1978, the frightening cold war rhetoric, and the cessation of arms-control negotiations in the early years of the Reagan administration caused great public anxiety. In response, PSR's membership grew rapidly to its present size of about 30,000 in 140 chapters. There are four chapters in North Carolina with a total membership of about 500.

It was in 1980 that several Russian physicians joined three Americans to form International Physicians for the Prevention of Nuclear War (IPPNW). At present about 200,000 physicians are members of affiliates of IPPNW in 69 countries.

All of these physicians in PSR and IPPNW are mostly engaged in educating themselves, other physicians, the general public and their governments about the medical realities of nuclear war. They publish a great deal of material in medical journals, produce large symposia for the professional and lay public, conduct grand rounds in innumerable hospitals, and speak to county medical societies and to church and civic groups.

The many studies and messages embodied in this worldwide work have been described in a publication of the Institute of Medicine of the National Academy of Sciences in 1986.[3]

The Arms Race and True National Security

In addition to this, PSR members speak and write of the devastation of social and economic infrastructures caused by the arms race here and around the world. This process, involving not only the expenditure of money but also of talent and of research and development resources, has come to be known as "Destruction Before Detonation."[7]

Physicians in North Carolina are painfully aware of what this means. We find ourselves unable to obtain the resources to treat more and more of our patients. Thirty-one million Americans have no health insurance. Medicaid is underfunded. Prenatal and child feeding and immunization programs have been cut, and our infant mortality is increasing. Medicare has been cut so that hospitals all over the state have begun losing money on Medicare patients.[8] North Carolina citizens may also wonder if the large diversions of federal money from education to military use may not be among the reasons for the poor performance of their children on the SAT. The homeless people we see everywhere are there in part because of a drop of 80% in federal funds for low-cost housing during the 1980s.

Nuclear war should be seen as a "final epidemic" for which no treatment is available ... therefore physicians should be active in preventing nuclear war as a part of their professional responsibility.

In addition to these signs of social decay, there are increasing signs of a decline in our economic performance. Every day the newspaper seems to report new evidence of our failure to compete with Japan, Germany or France. This may be because more than half of our most talented physicists, engineers and inventors are employed in military industry and laboratories. We have become number one in the quality of our military aircraft, but we can't make a state-of-the-art automobile, video cassette recorder or television set.

This same sad state of affairs is present in the Union of Soviet Socialist Republics (USSR). Our colleagues in the Soviet Committee of Physicians for Prevention of Nuclear War made this point repeatedly when a group of physicians from PSR visited them for two weeks in mid-1990. Arms races are even more devastating in many of the poorest nations, where military expenditures may exceed by many times the national budgets for health, education and all other social services, and in which huge percentages of very small per capita incomes go to the military.[9]

PSR has taken the position that the true security of any nation depends at least as much upon the quality of its economy and the education, health and well-being of its citizens as upon the power of the military. Thus physicians in PSR are engaged in a campaign to divert public resources from military waste, especially the production of new, "improved" nuclear weapons systems, to socially useful purposes such as health care, housing and education.

After the Cold War

Why, with the end of the "cold war," do we still work on the threat of nuclear and chemical/biological warfare? The present crisis in the middle east is perfectly illustrative. Two of the major players there—Unites States and Israel—have missiles and nuclear and chemical weapons. The other, Iraq, has missiles and chemical weapons. No one knows yet what catastrophe may occur as a result.

Nuclear weapons are spreading over the world, the technology for them and chemical/biological weapons coming mainly from "first world" countries. India has nuclear weapons. Pakistan will soon follow. What will happen there? Brazil and Argentina are on the threshold. What would have happened in the Falklands war if Argentina had already had nuclear bombs? Iraq is variously estimated to be from two to ten years from having nuclear weapons capability. This proliferation must stop. If it is to stop, the major nuclear powers—Unites States, USSR, Britain, France, China and Israel—will have to stop their own continued modernization, testing and stockpiling of nuclear weapons systems. This requires a Comprehensive Nuclear Test Ban. Such a test ban is now reliably verifiable. The Soviets have agreed to extensive seismic and on-site monitoring inside the USSR. They have offered to stop testing if the United States will reciprocate. The United States says it will not stop. Therefore, PSR is pushing for a comprehensive Test Ban Treaty. Without such a treaty more and more nations will cross the nuclear threshold, creating escalating instability and insecurity everywhere.

Environmental Degradation

The final part of PSR's post-cold war program is environmental. Environmental degradation is primarily a health issue. Water and air pollution do not threaten only owls, snail darters and trees. They threaten us all and affect our health. Such environmental problems as global warming, ozone depletion, the progressive pollution and depletion of water supplies, and the population explosion may be seen as a sort of a nuclear war in slow motion. Their potential consequences for human health have been described recently by Dr. Alexander Leaf[10] and Dr. Jennifer Leaning,[11] both members of PSR.

But the first substantive environmental task of PSR, now in progress, involves the ecologic disaster created by 40 years of secret and unregulated production of nuclear weapons by the Atomic Energy Commission and Department of Energy. These toxic sites will probably require about $200 billion for cleanup and containment alone. Their massive pollution of air, ground and water with radionuclides and chemicals affects the health of downwind and downstream people in ways only now beginning to be examined. PSR is working to make certain that the studies of these populations, and of the employees of the plants themselves, are done by research teams both independent of the Department of Energy and capable of doing the exacting epidemiologic work required.

Many of the nuclear weapons factories are now shut down because of environmental and safety violations. PSR is urging that they be kept closed, and that no new ones be built. The United States already has enough nuclear weapons to destroy world civilization ten times over, if not actually to exterminate the human race. It is therefore impossible to see why we need more or "better" ones.

Political Work

The professional commitment of physicians has, for hundreds of years, extended beyond the care of individual patients to concern with the health needs of communities, nations, the world. It seems to many physicians that this professional commitment requires that we should work to prevent the greatest threat to the public health that exists—nuclear war. This means political work, of course. The protection and improvement of the public health has always required political work on the part of physicians; we have not avoided it and we cannot if we will be true to our profession. ❑

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EDITORIAL

A Nurse's View of the Nursing Shortage

Mary Ann Peter, R.N., M.S.N.

I'm tired of hearing the nursing shortage discussed, diagrammed and analyzed as if it were a disease. I've seen the shortage, like a chronic illness, go through cyclical remissions and exacerbations without a long-term treatment plan that would make a lasting change.

I'm dispirited by the newspaper and magazine articles that report the effects of the nursing shortage in terms of dissatisfied patients, burned-out nurses, angry physicians and helpless administrators.

I'm weary of reading the endless surveys and studies done on the local, state and national level by task forces and blue ribbon commissions that blame social changes, government finances and competing agencies for the lack of an adequate supply of quality nursing services.

You may be surprised to know that the nation's supply of nurses has increased by 45% since 1977, and that 80% of RNs are actively employed as nurses. Despite this increase and a high employment rate, a major nursing shortage occurred in 1986, has continued into 1990, and is likely to worsen in the decade ahead. In hospitals alone, the number of RNs per 100 patients increased from 61:100 in 1977 to 98:100 in 1987.

Meanwhile, high school graduates are choosing from abundant career opportunities, leaving nursing school enrollments and graduations on a downhill course. National nursing school graduations peaked in 1984-1985 with 82,075 new RNs. By 1986-1987 this number had fallen by 14%. Growing numbers of health care consumers and treatments that prolong life will clearly require major additions to our current supply of two million RNs in the coming decade, and this means we need dramatic improvement in our ability to interest young people in a nursing career. Nursing careers now include a broad array of non-patient care jobs, such as research, utilization review, and risk management.

From the Director of Medical Nursing, Duke University Medical Center, Durham 27710.

Since the advent of prospective payment, hospitals have been forced to control costs. One means of cost control involved reducing the supply of ancillary workers. As a result, RNs began to represent larger proportions of the total hospital staff and inherited increased responsibilities formerly carried out by support staff, such as housekeeping, clerical duties, and messenger services. One highly respected study estimates that now about 50% of nurses' time is spent performing activities that do not require professional knowledge or skill.[1]

A recent American Organization of Nurse Executives and American Nurses' Association report[2] redefines the term "nursing shortage." What we really have is a "shortage of available time at work by RNs to perform RN functions." They believe that if the current RN work force would work more hours (46% of RNs work part-time), and if a significant amount of non-clinical work were removed from RNs' responsibilities, the shortage could be eliminated.

A shortage exists when the demand for a product exceeds the supply available. A shortage of a service is generally eliminated by a wage increase, and, as wages rise, purchasers respond by economizing or adjusting their use of the now more expensive service. However, since the need for nursing services has increased at the same time salaries have gradually risen, demand has remained well ahead of supply. Eventually, higher wages as well as important non-monetary incentives will attract more men as well as women into nursing.

What are some of these non-monetary incentives? A recent article in the *New England Journal of Medicine*,[3] describes an important vehicle for change in the relationship between the doctor and the nurse. The authors characterize the underlying relationship as a game that has changed over the past two decades. In the 1960s there was general "agreement between doctors and nurses that their relationship was hierarchical with doctors being superior to nurses." It was not uncommon for nurses to take initiative and responsibility while at the same time appearing to be passive and subservient. While the game is not entirely dead, the rules are decidedly different today. Nurses have attempted to change this old

relationship to a more cooperative partnership with physicians as well as with other health professionals. You may recognize these changes and the effect they have had on physicians and patient care. In an increasing number of settings the professional relationships are becoming more collegial and more interdependent. "More open communication between doctors and nurses uses nurses' observational skills better, enhances job satisfaction, and improves their ability to contribute to patient care."[3]

Both physicians and nurses can benefit from joint planning and problem solving. An example of this is the participation of two North Carolina physicians on the Western North Carolina Task Force on Nursing Manpower. F. Maxton Mauney, M.D., from Asheville and Susan Tripp Snider, M.D., from Spruce Pine joined 22 nurses and administrators in producing the second report in eight years about the nursing shortage in their region.[4] This 64-page study provides ample materials for physicians, nurses and administrators to discuss in their health care settings. Although the study was carried out in the western region of the state, the findings are generalizable to all of North Carolina.

The challenge of the nursing shortage is far more complicated than one editorial or one task force report can convey. The Western North Carolina Task Force Report gives a whopping 89 recommended strategies for addressing the problems. Strategies include increasing nurses' salaries, removing non-nursing tasks, and creating physician-nurse joint practice committees. At least ten strategies call for nurses and physicians to collaborate on needed changes.

What can North Carolina physicians do to help deal with the nursing shortage and its causes? Take time to understand the particular issues that your agency is dealing with and become personally involved. The current nursing shortage is not limited by geography nor practice environment. However, because no two settings are precisely alike, no one solution can be applied in exactly the same fashion in different agencies. Each institution must assume responsibilities for assessing its own environment. Critical to this assessment is the identification of "satisfiers" and "dissatisfiers" reported by staff nurses. Only by identifying and prioritizing these responses by staff can an institution plan to effectively alleviate its own nursing shortage.

Given the history of the shortage and the growing demand for nurses in all settings, this problem will not go away by itself. Creative strategies involving nurses, doctors and administrators working together are needed if we are to address the multiple issues of the nursing shortage. ❑

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FOR PATIENTS

NORTH CAROLINA MEDICAL SOCIETY

Health Watch

VOLUME 52 / NUMBER 1 / JANUARY 1991

Mental Illness

Mind and Body

Mental illness is a global term used to describe conditions that cause people to have unusual or negative changes in their behaviors or moods. These changes may be mild (sleeplessness, loss of appetite, irritability, etc.) or they may be severe causing a complete breakdown in people's ability to function in their daily lives. Generally mental illnesses are separated into three groups or syndromes: 1) mood disorders that affect people's emotional state causing them to be clinically depressed or experience exaggerated euphoria (highs); 2) personality disorders that affect people's ability to relate to other people or the everyday world; and 3) schizophrenic disorders that cause people to actually lose touch with reality.

What causes people to become mentally ill has been researched and debated for hundreds of years. It is generally agreed that there are various factors that alone or in combination can cause people to suffer from mental problems. Heredity, developmental experiences at an early age such as the loss of a parent, intense grief reactions to an event and stress associated with a physical illness all have been shown to play a part in causing mental illness. Every person has a unique pattern of genetic, developmental, environmental and physiological elements that combine to allow or defend against various mental maladies.



The most commonly seen and treated mental illnesses are those categorized as mood or affective disorders. These conditions can and do have a devastating effect on the lives of those who suffer from them. The following information describes the major features of mood disorders and how they are treated.

Mood disorders

Disorders of mood (often called affective disorders) include depressed emotional states—such as sadness, demoralization, disappointment and grief—and a few states of extreme euphoria. To understand mood disorders a distinction needs to be made between the terms mood and feelings. Moods are long-lasting; feelings in comparison are short-lived. The

From the North Carolina Medical Society, PO Box 27167, Raleigh, NC 27611.

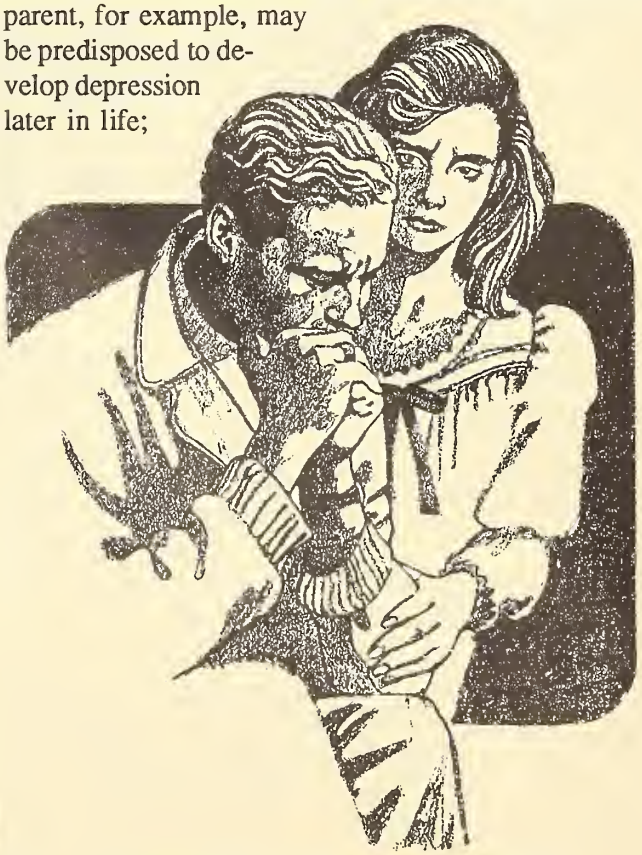
importance of mood is that it regulates how we will act or react to our world. Mood sets the tone for our lives. It tends to be very stable. Feelings either reinforce or counteract the current mood a person may be in.

Most people's moods vary between moderately subdued (down) and moderately euphoric (up). When this balance is upset and people become too down or too up they then are experiencing a mood disorder. Depression and mania represent the two extremes that can happen when this occurs.

Depression

Depression is something that we all experience at various times in our lives. The death of a loved one, loss of a job or a marriage breaking up are life events that can make us feel "sad" or "blue." This type of depression is normal, usually short-lived, needs little or no treatment and affected people tend to continue their lives with only mild disruption. On the other hand a major or clinical depression is a serious disorder that causes significant disruptions in people's lives and requires interventions (treatments) to resolve the problem.

The causes of depression are many and varied. As with other forms of mental illness, depression is generally caused by a combination of things. Risk factors for depression include: ***genetics***—studies done with identical twins have shown that if one twin suffers from depression, there is a 50 to 90 percent chance that the other twin will develop the illness. With fraternal twins, who share only half their genetic material, the likelihood of depression is 10 to 15 percent for a twin to develop depression if the other twin is affected; ***early losses***—people who experience the loss of a parent, for example, may be predisposed to develop depression later in life;



neuronal causes—actual injury to, or malfunction of, the brain that occurs with diseases like Huntington's or Parkinson's can cause depression as well as strokes; ***endocrinologic causes***—malfunctions in the body's network of glands such as too little thyroid hormone being released (hypothyroidism) or too much of the hormone cortisol (Cushing's disease); and ***pharmacological causes***—chemical imbalances in the brain also can lead to depression.



Symptoms of depression

Low mood

- Withdrawal: People suffering from depression may lose interest in activities that once gave them pleasure and may participate less in social interactions.
- Negativism: People who are usually tolerant of many different viewpoints may become very skeptical when depressed.
- Unhappiness: Depressed people may experience persistent sadness or frequent crying.

Low self-attitude

- Self-deprecating, guilty or self-blaming comments: Depressed people may put themselves down or accept blame for problems that do not exist or are clearly not their fault.
- Expressions of hopelessness: In depression, people may experience unusually persistent pessimism and may express despair in suicidal statements or acts.

Decreased activity and energy

- Decreased attentiveness to oneself or to one's tasks: Depressed people may neglect their appearance and let assignments at school, housework or projects at work slide.
- Decreased energy: Depressed people complain of fatigue and lack of energy or motivation.
- Decreased ability to concentrate: Depression often makes it difficult for people to think through problems.
- Excessive indecisiveness: Depressed people may vacillate between choices to an unusual degree and may defer decision making to others.

Additional symptoms

- Change in weight or in eating patterns: Decreased appetite leading to weight loss is a common symptom of depression. In some depressed people, however, there can be an increase in appetite and subsequent weight gain.
- Change in sleep patterns: Characteristically, people suffering from depression also suffer from interrupted sleep, but some depressed people sleep excessively and find waking difficult.

- Change in sexual interest and activity: Generally, sexual interest and performance are decreased in depressed people.

There are many different types of treatment for depression. Many of these are aimed directly at the suspected causes of the depression while others are more general but helpful. Antidepressant medication has become the cornerstone of treatment for major depression and to a lesser extent with mild depression. Before prescribing medication a physician will do a complete assessment of the person suffering from depression. This assessment involves: a history of the complaints, a physical examination, past history of depression and response to earlier treatments, family history of depression, an assessment of the severity of depression and risk of suicide.

Psychotherapy is always an appropriate treatment for depression. There are various types ranging from supportive to those with the more ambitious goals of effectively alleviating the symptoms of depression, uncovering psychological causes of depression and helping people gain insight into the causes of their problem. Psychotherapies are most helpful for mild depressions. They have less impact on severe depressions but can be helpful in improving relationships, thinking patterns or behaviors that may have led to the development of the condition.

Manic states

Manic states or mania is a mood disorder in which people have too much energy or are too euphoric (up). This "up" experience is accompanied by extreme happiness or irritability and can result in people engaging in irrational and dangerous activities. Those suffering from mania often have an unrealistic sense of self-importance, self-confidence, and mental speed and accuracy. It is estimated that as many as half of the people who experience clinical depressions also have episodes of manic behavior or mania. Often these people will move back and forth between the two moods.

States of mania vary in their severity. In its mildest form (hypomania) people's ability to perform tasks that call for high energy and require little attention to detail may be enhanced. When severe, however, mania can affect people's judgment and often leads to disability and hospitalization.

People suffering from mania may attempt the impossible without sufficient regard for the consequences. Some individuals have had delusions that they could fly and have suffered injuries and even died attempting to fly. Others may risk their financial security by making exorbitant purchases or giving money away to strangers.

As with depression the treatments for mania can take many different approaches. Medications such as lithium have proven to be very effective in treating manic states. Psychotherapy also can be helpful in providing support and in some cases insight to the underlying cause or causes of the problem.



Symptoms of mania

Elevated or high moods

- Excessive cheerfulness: Manic people may be unusually elated.
- Irritability: People with mania may become irritable even over small matters, especially when one attempts to "reason" with them.
- Anger beyond irritability: When suffering from mania, people may develop a haughty or superior stance that is not usual for them.

Increased self-attitude

- Expressions and acts of unusual optimism: People suffering from mania may exhibit poor judgment. For example, a normally conservative person may all of a sudden undertake foolish or risky business ventures or engage in sexual indiscretions.

Increased activity and energy

- Increased energy: They may appear tireless in the face of physical and mental efforts that would greatly tax unaffected people.
- Increased activity: The increased energy of mania often translates to a host of new projects at work or a seemingly insatiable desire to socialize.
- Excessive talking: People with mania may seem to talk endlessly, sometimes jumping haphazardly from idea to idea.

Additional symptoms

- Change in eating patterns: Manic people may have a huge appetite or may be too busy to eat.
- Change in sleep patterns: When suffering from mania, people feel less need for sleep, so sleep is usually decreased.
- Change in sexual interest: Sexual interest is often increased in manic people.

Summary

Mood disorders affect more people than any other mental illness. Approximately 10 percent of the people in the United States will experience an episode of major depression at some time in their lives. Around 2 percent of the nation's adolescents and adults suffer from mood disorders today. No one is immune. Major depression and manic-depressive illnesses are common in men, women, adolescents and children.

There have been great advances in the treatment of these conditions over the past 25 years. New medications have proven to be very effective in helping correct the imbalances in mood brought on by these illnesses. Psychiatrists, who are the physicians educated and trained to treat mental problems, have many more tools available to them. Medical schools today spend considerable time educating their students about

mental illness, its relationship to other physical illness and its diagnosis and treatment.

The most important fact for people suffering or encountering mental illness is its treatability. While some mental ailments may be more difficult to diagnose than others, and the best, most appropriate therapy may take time to discover, it is essential to take the first step to recovery early: seek appropriate professional help.

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1991

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- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:
- Hypersensitivity reactions have been reported in about 1.5% of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of **serum-sickness-like** reactions have been reported with the use of Ceclor. These are characterized by findings of erythema multiforme, rashes, and other skin manifestations accompanied by arthritis/arthralgia, with or without fever, and differ from classic serum sickness in that there is infrequently associated lymphadenopathy and proteinuria, no circulating immune complexes, and no evidence to date of sequelae of the reaction. While further investigation is ongoing, **serum-sickness-like** reactions appear to be due to hypersensitivity and more often occur during or following a second (or subsequent) course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults with an overall occurrence ranging from 1 in 200 (0.5%) in one focused trial to 2 in 8,346 (0.024%) in overall clinical trials (with an incidence in children in clinical trials of 0.055%) to 1 in 38,000 (0.003%) in spontaneous event reports. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy; occasionally these reactions have resulted in hospitalization, usually of short duration (median hospitalization = two to three days, based on postmarketing surveillance studies). In those requiring hospitalization, the symptoms have ranged from mild to severe at the time of admission with more of the severe reactions occurring in children. Antihistamines and glucocorticoids appear to enhance resolution of the signs and symptoms. No serious sequelae have been reported.
- Stevens-Johnson syndrome, toxic epidermal necrolysis, and anaphylaxis have been reported rarely. Anaphylaxis may be more common in patients with a history of penicillin allergy.
- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1% and, rarely, thrombocytopenia and reversible interstitial nephritis.

Abnormalities in laboratory results of uncertain etiology.
- Slight elevations in hepatic enzymes.
- Transient lymphocytosis, leukopenia, and, rarely, hemolytic anemia and reversible neutropenia.
- Rare reports of increased prothrombin time with or without clinical bleeding in patients receiving Ceclor and Coumadin concomitantly.
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly).

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Dedicated Ophthalmic Research

Banks Anderson, M.D.

The dedication on October 12, 1990 of the new addition to the Duke Eye Center, representing a 50% expansion of our ophthalmic research laboratories, is an occasion to reflect upon the contributions of ophthalmic research to general medicine. A recent striking example is the contribution of retinoblastoma research to our thinking about the general problem of cancer.

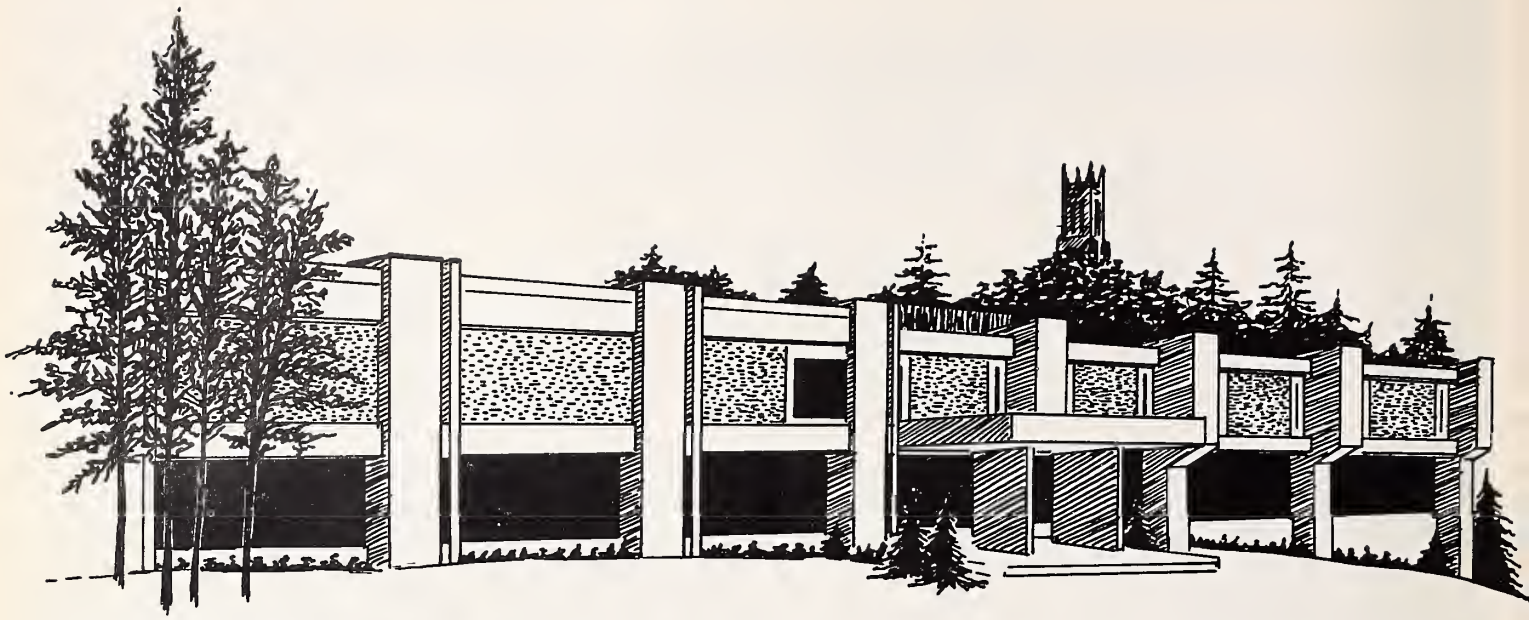
Retinoblastoma is the most common primary intraocular malignancy of children. For many years it has been known that individuals surviving bilateral retinoblastomas have an approximately 50% chance of having children with this malignancy. In addition, bilateral survivors themselves have a high incidence of osteogenic sarcoma and other second malignancies that develop during young adult life. We have taught for years that retinoblastoma was an example of a dominantly inherited oncogene which was passed along to descendants. We implied that the otherwise stable retinal cells were stimulated to endlessly divide by the presence of an abnormal cancer causing gene.

Very recently this teaching has been turned topsy-turvy by new research findings which have implications ranging far beyond the eye. It turns out that it is not the *presence* of a new gene that causes retinoblastoma but the *absence* of a normal gene. What is passed along to descendants is a chromosome lacking the normal gene that suppresses retinal cell growth and which also seems to have a suppressor effect on the growth of other cell types. The problem is not one of addition but of deletion, not one of genetic dominance but of a recessive condition, not one of a single event but of two hits. One copy of the normal gene in any retinal cell is apparently sufficient to prevent cancerous cell growth. The high incidence of retinoblastoma in survivor descendants is the result of a "second hit" in which the only remaining normal gene copy is lost from a cell or cells. The chances that such an error will occur during the many divisions of the many retinal cells is so great that most of the infants in whom all retinal cells start out missing one copy eventually develop the cancer from this second "hit." A few unfortunate children who start out with two normal genes in all of their retinal cells will during development eliminate both copies from a viable cell. These children then develop retinoblastoma in one spot in one eye and do not pass deficient chromosomes to their children.

What are the implications? In the broadest sense, cancer can be thought of as the natural undifferentiated state of our cells to which a biological entropy seeks to return them. Given the proper nutrients, primitive cells replicate endlessly and are "cancers." We are all collections of cancers waiting to happen. Our higher cell specialization is not that our cells grow, but that they *stop* growing. Genetic additions provide this control and it is genetic loss that returns a tissue to the more basic cancer state. But functional loss is a two-step process, for there are usually two normal copies of a given gene. Both must go before the function at the locus is lost. Familial retinoblastoma seems then to be the result of transmission of a chromosome 13 which lacks the rb1 locus in the q14 band. This misfortune is followed by a second event in which the remaining normal gene copy is lost or becomes functionless and the cells revert to endless growth and retinoblastoma results. Familial retinoblastomas arise in multifocal spots in both right and left retinas and even occasionally in the third eye, also known as the pineal. Patients with bilateral retinoblastoma and pinealoma are sometimes said to have trilateral retinoblastoma.

The normal gene on chromosome 13 in the q14 band (rb 1 locus), which when absent allows retinal cells to divide endlessly until their nutrients are exhausted, is the first recessive human cancer-preventing gene ever isolated and sequenced.[1,2] Retinoblastoma has become a model for other cancers and tumors resulting from loss of genetic function. This group now seems to include: osteosarcoma, Wilms tumor, bladder cell carcinoma, rhabdomyosarcoma, hepatoblastoma, meningioma, acoustic neuroma, and uveal melanoma, with the list growing longer each month.[3]

From the Duke University Eye Center, Box 3802, Durham 27710.



The Duke Eye Center

Think of the enormous therapeutic implications of these findings. If the normal gene or its product can be introduced, abnormal cell growth—cancer—may be controlled or prevented.

Decades of study of retinoblastoma have led to a revolution in cancer thought. The topsy-turvy turnabout has changed what we thought was a dominantly inherited cancer into a recessive one, an oncogene into a normal growth controlling gene, a single cancer-causing event into a two-step process. There is now considerable hope of changing the therapy of at least some cancers from destruction and poisoning of cells to prevention and normalizing of cells.

Are you missing a copy of a normal growth suppressor gene? Are you safe from the second hit that will cause your cancer? We are already trying to answer such questions for children of retinoblastoma survivors.

Research done carefully and in depth in any area of medicine, including ophthalmology, may have benefits extending far beyond the initial area of interest. Research universities are a unique national resource. As one of the smaller programs of the Duke University Medical Center, with four full-time research faculty and their supporting staff, the Duke Eye Center carries on an active research program. Let us hope that just as research on retinoblastoma has illuminated problems far beyond the retina, so the work in this new addition will extend our quality of life and comfort. With the dedication of these new facilities and with a staff dedicated to ophthalmic research, the potential is there. ❑

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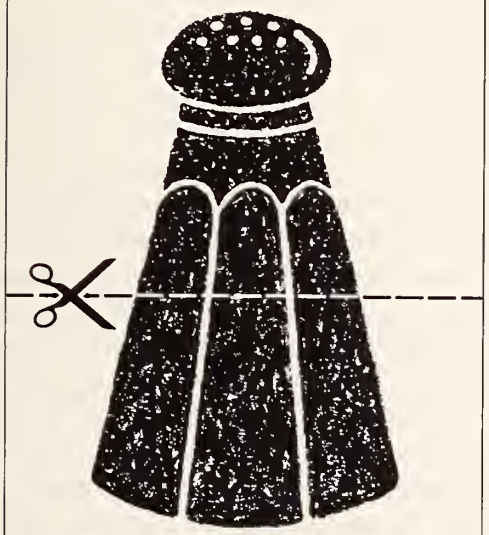
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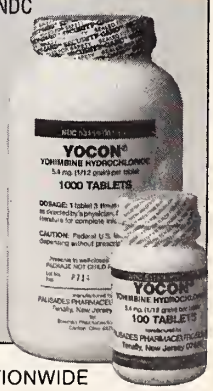
Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

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Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

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The Optimum Use of Laboratory Tests in the Surgical Patient

Robert Rutledge, M.D., Colin G. Thomas, Jr., M.D., Farid F. Muakkassa, M.D., Alfred R. Hansen, M.D.

Advances in medicine have been associated with an increasing sophistication—and cost—of laboratory tests. A test performed pre- or postoperatively should be based on the need to answer a specific question identified by a careful history and physical examination. Routine tests unrelated to history and examination are rarely helpful. In this paper, special attention is given to laboratory tests in the intensive care unit (ICU). Because the ICU is one of the major consumers of hospital resources, improvements in the use of laboratory tests in the ICU has a potential for large savings.

The first recorded history of surgical patients dates to the Smith Papyrus about 3,000 B.C.[1] There were no laboratory tests. Diagnosis and management were contingent upon the history and examination of the patient. Diseases were simply categorized: (1) An ailment which I will treat—anticipating the patient to recover; (2) An ailment with which I will contend—being uncertain as to the outcome; and (3) An ailment not to be treated—expecting the patient not to recover.

During the ensuing 5,000 years, the physician has recognized the need to improve his or her diagnostic skills and assessment of prognosis. In addition to having a better understanding of the pathophysiology of disease, a variety of tests have been developed to complement clinical skills. Initially, these were simple, i.e., recording the characteristics of the pulse, examining the urine, vomitus and feces. Measurement of body temperature was not accurately recorded until the time of Seguin—1871.2 As recently as the 1930s, the only tests routinely procured on the admission of a patient to a hospital were a complete blood count, blood sugar, blood urea, urinalysis, and test for syphilis. Through the gradual emergence of modern technology, laboratory tests have become much more sophisticated and we now have the ability to assess extracellular electrolytes and other hematologic, metabolic and immunological indicators of disease. Laboratory evaluations are valuable in many diagnostic situations and indispensable in others, but it should be emphasized that laboratory testing is an adjunct to a detailed history and physical examination—precepts first enunciated in the Egyptian papyrus. These sound principles apply to the patient on an initial visit, when hospitalized, and in the pre- and postoperative periods.

Laboratory tests are clearly valuable in the care of patients. Unfortunately, inherent in every test are many often unrecognized disadvantages. Blood tests, almost completely safe, create a problem of excessive use by their ready availability. Because of the value of various blood tests, it may be tempting to ignore the excessive costs and utilization of certain laboratory tests. But this approach applied in the emergency department, the clinic, pre- and postoperatively, and in the intensive care unit can waste huge amounts of health care resources. This is money that the American health care system can ill afford to loose. This makes it incumbent upon the physician to clearly understand the need for a laboratory test in each clinical situation and to use these judiciously. This paper examines some of the current laboratory tests used in the surgical patient and recommends an approach employing modern technology that should optimize the use of our laboratory facilities.

Routine Laboratory Testing

Should any laboratory examinations be routine? Some have suggested a number of "routine" tests be performed as part of the preoperative patient evaluation of all hospitalized patients, e.g., complete blood count, urinalysis, and in selected patients, electrocardiogram, chest x-ray, and an electrolyte panel. The justification for these "routine" tests is a combination of their low risk, common abnormality and relatively low expense. In fact, all of these assumptions are questionable. Further laboratory testing should be based upon a knowledge of the application of the particular test to a specific problem

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and the sensitivity, specificity, and predictability of the laboratory examination.

The cost effectiveness of such tests must also be considered. This requires a thorough understanding of the test and the medical advances that make some tests outmoded. For example, some patients are still undergoing radioactive iodine uptake test for the evaluation of a thyroid nodule. This is a misuse of such a test.[3]

Preoperative Evaluation

The surgeon's use of laboratory tests is comparable to that of physicians in other disciplines for the detection/exclusion, diagnosis, monitoring and follow-up of disease. An important component of laboratory evaluation for surgeons is the preoperative assessment of risk factors that may affect operative morbidity and mortality. When an otherwise healthy patient is involved, laboratory tests can be minimized except where guided by findings identified by the history and physical examination. Tests that are often performed as a part of preoperative "screening" include: complete blood count, urinalysis, typing and screening of blood for potential cross matching, and serum electrolytes (SMA_6).

It has been repeatedly emphasized that a careful history and physical examination will usually identify organ systems that may require further diagnostic studies. This has been shown to be true for the coagulation systems, blood glucose and liver function. Special laboratory studies are requisite in the appraisal of certain specific conditions such as jaundice, fluid and electrolyte abnormalities in patients who have diarrhea or vomiting, the appraisal of diabetes, and bleeding disorders. Further tests are advised in patients with comorbid states such as cirrhosis (liver function tests), chronic obstructive pulmonary disease (pulmonary function studies). Adjunctive tests such as an electrocardiogram and chest x-ray should be used on a more selective basis for patients who are asymptomatic but over 40 years of age. These studies are designed to identify occult disease and also to serve as a baseline for patients undergoing operative procedures of greater risk with higher complication rates, e.g., abdominoperineal resection, colectomy, partial gastrectomy.

Kaplan analyzed tests performed on a surgical service in preoperative patients.[4] These included the following: prothrombin time, partial prothrombin time, platelet count, complete blood count, differential cell count, automated multiple electrolyte and enzyme analysis, and glucose. According to accepted and established criteria for such tests, approximately 60% were performed without indication. This varied from 90% of the patients having a platelet count to 35% of patients having an automated multiple analysis. Of further interest was that in from 0.2% through 0.4% there were unexpected abnormalities not relevant to patient care. These, in general, were ignored by the physician and apparently had no ill effect on the patient's course. Kaplan concluded that: (1) a large portion of preoperative testing can be eliminated without significant adverse medical consequences; and (2) preoperative testing should be performed only for specific medical indications.

With advancing age, and longer and more complex operative procedures, not only must organ systems be evaluated, but baseline data are requisite to monitor changes that might occur in the postoperative period. Comorbid conditions on a surgical service in 26 patients over 50 years of age undergoing treatment of breast cancer during 1988 included a spectrum of diagnoses: e.g., hypertension, angina pectoris, diabetes, urinary tract infection, chronic obstructive pulmonary disease, aortic valvular disorder, congestive heart failure, diabetic neuropathy, cardiac dysrhythmia, hypothyroidism, ischemic heart disease, etc. These data, although limited, illustrate the complexity of problems in many of our hospitalized patients. The comorbid conditions varied from 0 to 8 with a mean of 2.9 and a median of 3.0. In patients under 50 years of age, the mean of comorbid conditions was 0.5. Thus, the laboratory tests need to be individualized depending on the patient, but again should be guided by the history and physical examination. Rigid guidelines cannot substitute for clear thinking.

Anesthetic Considerations

In addition to evaluation of the patient by the surgeon, the anesthesiologist will appraise the patient's operative risk and choice of anesthetic techniques. The American Society of Anesthesiologists approved the following statement on routine preoperative laboratory and diagnostic screening, October 14, 1987:[6]

> "Preanesthetic laboratory and diagnostic testing is often essential; however, no routine laboratory or diagnostic screening test is necessary in the preanesthetic evaluation of patients. (Routine refers to a policy of performing a test or tests without regard to clinical indications in an individual patient. Screen means efforts to detect disease in unselected populations of asymptomatic patients.) Appropriate indications for ordering tests include the identification of specific clinical indications or risk factors (e.g., age, pre-existing disease, magnitude of the surgical procedure). Anesthesiologists, anesthesiology departments, or health care facilities should develop appropriate guidelines for preanesthetic screening tests in selected populations (e.g., ECG in the adult patient with diabetes mellitus) after considering the probable contribution of each test to patient outcome. Individual anesthesiologists should order test(s) when, in their judgment, the results may influence decisions regarding risks and management of the anesthetic agent(s) and surgery."

As others have concluded, "routine" preoperative laboratory testing is of minimal value and significant expense.

Postoperative Evaluation

The need for tests in the postoperative period will reflect the metabolic changes secondary to the disease and the surgical procedure. In the healthy patient who has undergone a "minor" procedure, no other laboratory tests should be necessary in the postoperative period. In the hospitalized patient, it has, unfortunately, become routine to obtain a daily blood count and electrolytes regardless of the patient's status. This is well illustrated on rounds in which the students and house staff are expected not only to give a brief summary of the patient's status but also to enunciate the laboratory studies of the day. Fever is another clinical situation that often leads to a "Pavlovian" response in terms of obtaining a battery of laboratory tests. While fever may constitute an indication for laboratory investigation such as a blood culture, urinalysis, CBC, chest x-ray, and culture of any drainage site, an extensive body of literature shows these tests to be wasteful unless directed by findings obtained from a careful clinical assessment.[5]

Laboratory Tests in the Emergency Department

Intelligent use of the laboratory in the emergency department is complicated by the need to make decisions rapidly. Two entire volumes of *Emergency Medicine Clinics of North America*[7,8] are dedicated to the use of the clinical laboratory in the emergency department, indicating the importance of laboratory tests in clinical practice. Laboratory tests in the emergency department tend to be ordered as fairly broad batteries, rather than in a strictly logical progression. The one- to two-hour turnaround time for many of the tests would prevent efficient patient flow if they were to be done serially as dictated by the results of previous studies. Our monitoring data indicate that nearly 40% of the patients seen in an academic emergency department get at least a complete blood count, a like number have some form of serum chemistries ordered, 30% get a urinalysis, and nearly 25% have chest x-rays. More than 10% have arterial blood gases drawn, and more than 5% have x-rays of the abdomen.[9]

The high proportion of patients having laboratory studies as part of their assessment may reflect the tendency of less experienced physicians to supplement their clinical judgment with "hard data." To assist the emergency department physician in rapid and appropriate assessment of the emergency department patient, laboratory testing is obtained based on the presenting syndrome and the likelihood of the diagnosis, being more specific when there is a necessity to exclude a more dire, albeit less likely, diagnosis[9] (see table 1).

This approach, although imperfect, provides a guideline for management. It assists the physician in thinking in terms of the diagnostic possibilities, with directed laboratory studies rather than a broad battery of tests (the "shotgun" approach). Again, the history and physical examination of the patient are keys to directed laboratory utilization.

Table 1
A decision matrix for abdominal pain: an example of laboratory use in the emergency department

Complaint/Syndrome	Laboratory Test
1. Abdominal pain in a young healthy male	Complete blood count
2. Symptoms of a urinary tract infection	Urinalysis, consider culture and antibiotic sensitivity
3. Patient is female (with above symptoms)	Add urinary chorionic gonadotrophin for pregnancy
4. Patient has protracted vomiting/diarrhea	Add SMA_6
5. Patient with history of diabetes	Add glucose
6. Pain suggests biliary tract disease, pancreatitis	Add liver enzymes, bilirubin, amylase
7. Patient has renal failure, previous history of malignancy, alcohol abuse or presents with obtunded mental state	Add calcium, magnesium, phosphorus
8. DDx: includes renal colic	Roentgenogram (supine) of abdomen, intravenous pyelogram
9. DDx: includes bowel obstruction	Roentgenogram of abdomen (supine, upright), chest
10. DDx: includes acute cholecystitis, esp. in diabetic, or febrile patient	Ultrasound of gallbladder, hepatobiliary scan
11. Patient is elderly, with prior history of cardiac disease, or symptoms compatible with angina	ECG, chest roentgenogram
12. History suggests colonic obstruction	Consider emergent barium enema
13. Presentation suggests gynecologic etiology, e.g., ectopic pregnancy	Pelvic ultrasound

Laboratory Costs in the Intensive Care Unit

In evaluating the cost effectiveness of laboratory procedures in providing exemplary patient care, special attention should be given the ICU. The ICU is usually the greatest consumer of hospital resources, and optimum use of laboratory tests in that setting should have a major impact on overall laboratory utilization. At a national level, approximately 13% of all hospital beds are ICU beds. This small subgroup consumes approximately 50% of the hospital's resources.[10] Further, reimbursement for the care of patients in these beds for the most part is at the same rate as for patients who are not so severely ill. About 40% of all health care expenditures are related to hospital services, of which 10% to 15% ($17 to $25 billion—1985 data) are estimated to be expended on critical care services.[11,12]

The University of North Carolina Hospitals contain 488 acute care beds, 87 intensive care beds and 29 bassinets. The overall occupancy rate approximates 87%. The intensive care beds constitute 15% of the pediatric and adult beds. A significant portion of charges in the ICU are related to laboratory procedures. For example, the charges for laboratory procedures in seven beds of the surgical ICU for one week of November, 1988, and January, 1989, are listed below. Note the comparative charges for 32 acute care beds for the same period ("( )" = STAT charges). There are similar differences on the medical service.

	November '88	January '89
Surgical ICU (7 beds)	$20,318 ($3,270)	$35,395 ($4,860)
Surgical Non Acute Care (32 beds)	$10,510 ($32)	$ 8,937 ($310)
Medical ICU (5 beds)	$23,572 ($2,010)	$20,922 ($2,380)
Medical Non Acute Care (20 beds)	$12,969 ($430)	$12,211 ($540)

In the surgical ICU during a two-month period, STAT requests constituted 14.6% of the overall charges. This was comparable to the medical ICU (10%) and differs significantly from such requests on an in-patient surgical service where "STAT" requests constitute approximately 1.7% of overall laboratory charges.

Data from an ICU database,[13] which are continuously monitored, provide important information regarding laboratory resource utilization. As an example, the charge for a blood gas analysis, with an additional $10 charge for a "STAT" request, was studied. Arterial blood gases (ABG) are the tests most commonly ordered in our ICU with an average of 813 per month (figure 1). Multivariate statistical analysis showed that severity of illness, PaO_2, PCO_2, and the use of a ventilator all were associated with ABG utilization. However, multivariate analysis demonstrated the mere presence of an arterial line was the most important determinant of ABGs drawn per patient ($P<0.00001$). This was independent of all other measures of the patient's clinical status (figures 2 and 3).

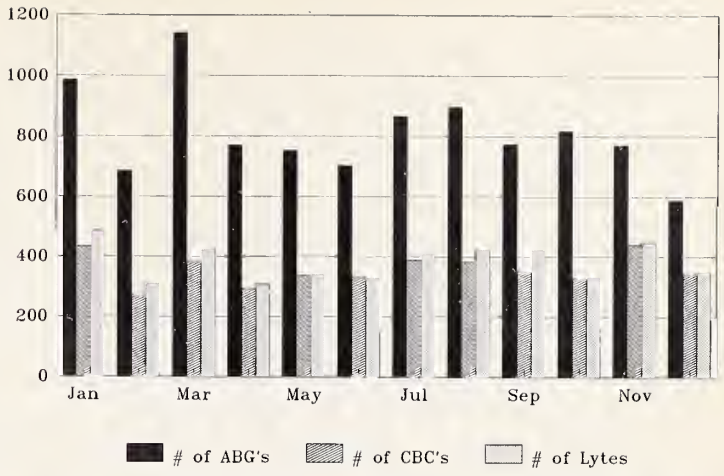


Figure 1. Intensive care unit laboratory utilization. The number of Arterial blood gases, CBCs and electrolytes obtained in the surgical intensive care unit at the University of North Carolina Hospitals from 11-1-88 to 1-1-89. The most commonly ordered was the Arterial blood gas.

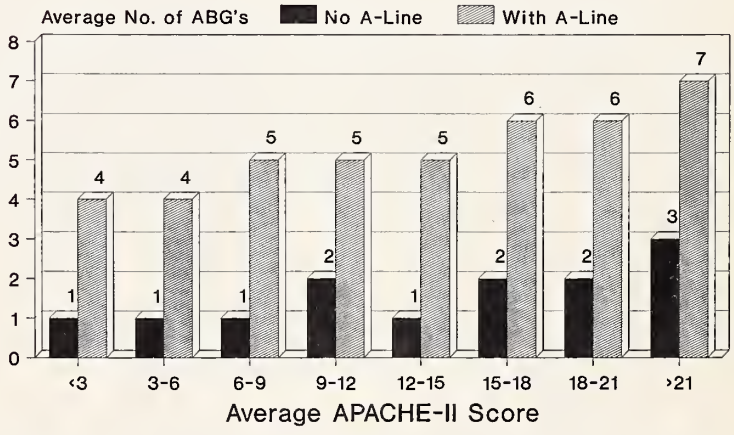


Figure 2. The number of Arterial blood gases and APACHE II scores. The number of Arterial blood gases drawn was more contingent upon the presence of an arterial line than upon the APACHE II score.

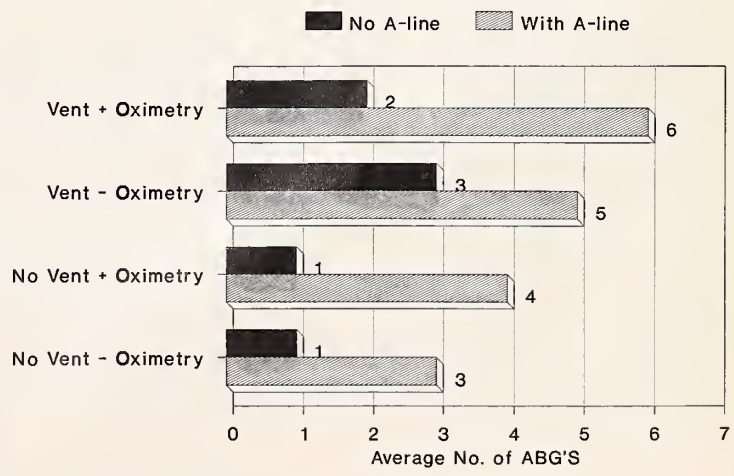


Figure 3.Number of Arterial blood gases and presence of ventilator or pulse oximeter. Patients who had arterial lines had more Arterial blood gases drawn whether or not they were ventilated and whether or not they were monitored by a pulse oximeter.

This suggests that ABGs are being drawn excessively simply because of the presence of an arterial line. Therefore, to optimize the number of ABGs drawn, it was recommended that: (A) A policy for specific indication for placement of arterial lines and drawing ABGs be adopted; and (B) In-service education on the use of pulse oximeters be given to nurses and physicians to optimize the use of ABG analyses.

By reducing ABG utilization by 25%, monthly charges could be decreased by $7,000 or $84,000 per year in surgical ICU alone. If adopted in all intensive care units, substantial savings could be realized. Note that arterial blood gas analysis is the most expensive laboratory test. Nationwide charges vary from $50 to $150 per test.[8] Similar evaluations may be made for overall number of laboratory studies—CBCs, electrolytes, etc. Further, such an approach may also help evaluate other procedures, each of which is associated with a certain risk and cost, such as the placement of arterial lines, the use of the ventilator, and Swan-Ganz catheters. The presence of these lines will, in turn, be an indication for monitoring by various laboratory tests.

Concurrent monitoring systems that provide continuous information on laboratory utilization have been too expensive in the past to be cost-effective. Now, with localization of high-cost areas in the hospital, such as the ICU, and with the improvement in computer technology, such systems have been demonstrated to be useful in monitoring laboratory utilization. Large cost savings can be realized through monitoring techniques, institution of protocols, and other measures to provide continuous feedback on the utilization of hospital resources. As medicine has progressed, it has steadily improved its use of available diagnostic tools. Continued development of capabilities to monitor laboratory utilization will improve our use of these tests, leading to significant cost savings without compromising patient care. Unfortunately, studies have documented and continue to show that such careful attention is not always maintained, and waste occurs. To decrease waste of health care resources, educational programs must be continuous. Studies have shown that changes in behavior induced by ad hoc educational programs will not be long lasting.[14] ❑

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CONTROL ACID RAIN

with once-a-night hs therapy for active duodenal ulcers



ranitidine HCl/Glaxo 300 mg tablets

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See adjacent page for Brief Summary of Product Information

In active duodenal ulcers

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Zantac® 300
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Zantac® 150 Tablets
(ranitidine hydrochloride)

Zantac® 300 Tablets
(ranitidine hydrochloride)

Zantac® Syrup
(ranitidine hydrochloride)

BRIEF SUMMARY

The following is a brief summary only. Before prescribing, see complete prescribing information in Zantac® product labeling.

INOICATIONS AND USAGE: Zantac® is indicated in:
1. Short-term treatment of **active duodenal ulcer.** Most patients heal within four weeks.
2. **Maintenance therapy** for duodenal ulcer patients at reduced dosage after healing of acute ulcers.
3. The treatment of **pathological hypersecretory conditions** (eg, Zollinger-Ellison syndrome and systemic mastocytosis).
4. Short-term treatment of **active, benign gastric ulcer.** Most patients heal within six weeks and the usefulness of further treatment has not been demonstrated.
5. Treatment of **gastroesophageal retlux disease (GERD).** Symptomatic relief commonly occurs within one or two weeks after starting therapy. Therapy for longer than six weeks has not been studied.

In active duodenal ulcer; active, benign gastric ulcer; hypersecretory states; and GERD, concomitant antacids should be given as needed for relief of pain.

CONTRAINDICATIONS: Zantac® is contraindicated for patients known to have hypersensitivity to the drug.

PRECAUTIONS:

General: 1. Symptomatic response to Zantac® therapy does not preclude the presence of gastric malignancy.

2. Since Zantac is excreted primarily by the kidney, dosage should be adjusted in patients with impaired renal function (see DOSAGE AND ADMINISTRATION). Caution should be observed in patients with hepatic dysfunction since Zantac is metabolized in the liver.

Laboratory Tests: False-positive tests for urine protein with Multistix® may occur during Zantac therapy, and therefore testing with sulfosalicylic acid is recommended.

Drug Interactions: Although Zantac has been reported to bind weakly to cytochrome P-450 *in vitro,* recommended doses of the drug do not inhibit the action of the cytochrome P-450-linked oxygenase enzymes in the liver. However, there have been isolated reports of drug interactions that suggest that Zantac may affect the bioavailability of certain drugs by some mechanism as yet unidentified (eg, a pH-dependent effect on absorption or a change in volume of distribution).

Carcinogenesis, Mutagenesis, Impairment ot Fertility: There was no indication of tumorigenic or carcinogenic effects in lifespan studies in mice and rats at doses up to 2,000 mg/kg/d.

Ranitidine was not mutagenic in standard bacterial tests (*Salmonella, Escherichia coli*) for mutagenicity at concentrations up to the maximum recommended for these assays.

In a dominant lethal assay, a single oral dose of 1,000 mg/kg to male rats was without effect on the outcome of two matings per week for the next nine weeks.

Pregnancy: ***Teratogenic Effects: Pregnancy Category B:*** Reproduction studies have been performed in rats and rabbits at doses up to 160 times the human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Zantac. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: Zantac is secreted in human milk. Caution should be exercised when Zantac is administered to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

Use in Elderly Patients: Ulcer healing rates in elderly patients (65 to 82 years of age) were no different from those in younger age groups. The incidence rates for adverse events and laboratory abnormalities were also not different from those seen in other age groups.

ADVERSE REACTIONS: The following have been reported as events in clinical trials or in the routine management of patients treated with Zantac®. The relationship to Zantac therapy has been unclear in many cases. Headache, sometimes severe, seems to be related to Zantac administration.

Central Nervous System: Rarely, malaise, dizziness, somnolence, insomnia, and vertigo. Rare cases of reversible mental confusion, agitation, depression, and hallucinations have been reported, predominantly in severely ill elderly patients. Rare cases of reversible blurred vision suggestive of a change in accommodation have been reported.

Cardiovascular: As with other H_2-blockers, rare reports of arrhythmias such as tachycardia, bradycardia, atrioventricular block, and premature ventricular beats.

Gastrointestinal: Constipation, diarrhea, nausea/vomiting, abdominal discomfort/pain, and rare reports of pancreatitis.

Hepatic: In normal volunteers, SGPT values were increased to at least twice the pretreatment levels in 6 of 12 subjects receiving 100 mg qid intravenously for seven days, and in 4 of 24 subjects receiving 50 mg qid intravenously for five days. There have been occasional reports of hepatitis, hepatocellular or hepatocanalicular or mixed, with or without jaundice. In such circumstances, ranitidine should be immediately discontinued. These events are usually reversible, but in exceedingly rare circumstances death has occurred.

Zantac® 150 and 300 (ranitidine hydrochloride) Tablets
Zantac® (ranitidine hydrochloride) Syrup

Musculoskeletal: Rare reports of arthralgias.

Hematologic: Blood count changes (leukopenia, granulocytopenia, thrombocytopenia) have occurred in a few patients. These were usually reversible. Rare cases of agranulocytosis, pancytopenia, sometimes with marrow hypoplasia, and aplastic anemia have been reported.

Endocrine: Controlled studies in animals and man have shown no stimulation of any pituitary hormone by Zantac and no antiandrogenic activity, and cimetidine-induced gynecomastia and impotence in hypersecretory patients have resolved when Zantac has been substituted. However, occasional cases of gynecomastia, impotence, and loss of libido have been reported in male patients receiving Zantac, but the incidence did not differ from that in the general population.

Integumentary: Rash, including rare cases suggestive of mild erythema multiforme, and, rarely, alopecia.

Other: Rare cases of hypersensitivity reactions (eg, bronchospasm, fever, rash, eosinophilia), anaphylaxis, angioneurotic edema, and small increases in serum creatinine.

OVERDOSAGE: Information concerning possible overdosage and its treatment appears in the full prescribing information.

OOSAGE AND ADMINISTRATION: (See complete prescribing information in Zantac® product labeling).

Active Duodenal Ulcer: The current recommended adult oral dosage is 150 mg or 10 ml (2 teaspoonfuls equivalent to 150 mg of ranitidine) twice daily. An alternate dosage of 300 mg or 20 ml (4 teaspoonfuls equivalent to 300 mg of ranitidine) once daily at bedtime can be used for patients in whom dosing convenience is important. The advantages of one treatment regimen compared to the other in a particular patient population have yet to be demonstrated.

Maintenance Therapy: The current recommended adult oral dosage is 150 mg or 10 ml (2 teaspoonfuls equivalent to 150 mg of ranitidine) at bedtime.

Pathological Hypersecretory Conditions (such as Zollinger-Ellison syndrome): The current recommended adult oral dosage is 150 mg or 10 ml (2 teaspoonfuls equivalent to 150 mg of ranitidine) twice a day. In some patients it may be necessary to administer Zantac® 150-mg doses more frequently. Doses should be adjusted to individual patient needs, and should continue as long as clinically indicated. Doses up to 6 g/d have been employed in patients with severe disease.

Benign Gastric Ulcer: The current recommended adult oral dosage is 150 mg or 10 ml (2 teaspoonfuls equivalent to 150 mg of ranitidine) twice a day.

GERD: The current recommended adult oral dosage is 150 mg or 10 ml (2 teaspoonfuls equivalent to 150 mg of ranitidine) twice a day.

Oosage Adjustment for Patients with Impaired Renal Function: On the basis of experience with a group of subjects with severely impaired renal function treated with Zantac, the recommended dosage in patients with a creatinine clearance less than 50 ml/min is 150 mg or 10 ml (2 teaspoonfuls equivalent to 150 mg of ranitidine) every 24 hours. Should the patient's condition require, the frequency of dosing may be increased to every 12 hours or even further with caution. Hemodialysis reduces the level of circulating ranitidine. Ideally, the dosage schedule should be adjusted so that the timing of a scheduled dose coincides with the end of hemodialysis.

HOW SUPPLIED: Zantac® 300 Tablets (ranitidine hydrochloride equivalent to 300 mg of ranitidine) are yellow, capsule-shaped tablets embossed with "ZANTAC 300" on one side and "Glaxo" on the other. They are available in bottles of 30 (NDC 0173-0393-40) tablets and unit dose packs of 100 (NDC 0173-0393-47) tablets.

Zantac® 150 Tablets (ranitidine hydrochloride equivalent to 150 mg of ranitidine) are white tablets embossed with "ZANTAC 150" on one side and "Glaxo" on the other. They are available in bottles of 60 (NDC 0173-0344-42) and 100 (NDC 0173-0344-09) tablets and unit dose packs of 100 (NDC 0173-0344-47) tablets.

Store between 15° and 30° C (59° and 86° F) in a dry place. Protect from light. Replace cap securely after each opening.

Zantac® Syrup, a clear, peppermint-flavored liquid, contains 16.8 mg of ranitidine hydrochloride equivalent to 15 mg of ranitidine per 1 ml in bottles of 16 fluid ounces (one pint) (NDC 0173-0383-54).

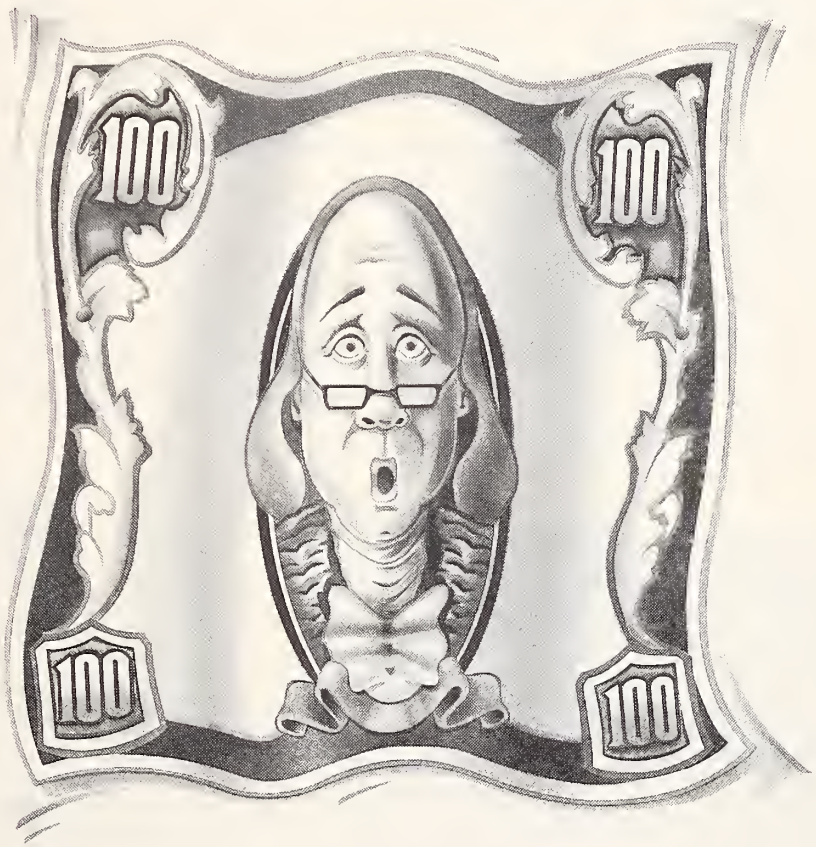
Store between 4° and 25° C (39° and 77° F). Dispense in tight, light-resistant containers as detined in the USP/NF.

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The Halcyon Days of Youth, Part II

The Second Year at the "New" UNC Medical School

John B. Graham, M.D.

As first-year students at the University of North Carolina School of Medicine we were aware that the school would move during the summer of 1939. But we were unprepared for the splendid facilities we found in the fall. This entirely new building (#52 in figure 1; lower left in figure 2) was on South Columbia Street at the far end of the campus. The only other facilities beyond South Road were Wilson Hall, the Bell Tower, the Tin Can, and Woolen Gym with its new Bowman Gray pool and Kenan Stadium. We had the feeling that we had moved far out of town, and sometimes tried to hitch-hike from the Carolina Inn.

There were five floors in the new building. The basement was occupied by the School of Public Health (whose brochures described the building as the School of Public Health and Medicine). On the first floor were Pathology (north) and Bacteriology (south). The second had Pharmacology (north) and Physiology (south). The third had Gross Anatomy (north) and Biodhemistry (south). The north end of the fourth floorhad a lounge for graduate students, and the south end contained the animal quarters. *Mirabile dictu*, there was an *elevator* in the center of the building, although students were not supposed to use it.

The central part of the building contained the shared facilities: Dean's Office and Library (now the Dean's Office) on the first floor with stacks below. An auditorium was present on the east side of the second floor with a lecture hall opposite it on the west side. The Histology teaching facilities occupied the east side of the third floor. Departmental space was plentiful, because faculty members were few. Each had both a private office and a research laboratory, previously unheard of.

The first semester of the second year was a continuation of the first year with Pathology, Pharmacology and Bacteriology. Pharmacology and Bacteriology were taught in several morning lectures and several afternoon "wet" laboratories each week. Pathology was taught only in the mornings, three days a week: an hour of lecture followed by three hours of "dry" laboratory. In addition there were several smaller lecture courses of which only Public Health, taught by Drs. Milton Rosenau and Harold Brown, sticks in my mind.

Pathology was the glamor course when the year began, because we were studying disease for the first time. We examined the mechanisms causing disease, looked at slides and pickled specimens illustrating various diseases, studied "unknowns," *and were on call for autopsies at Watts Hospital!*

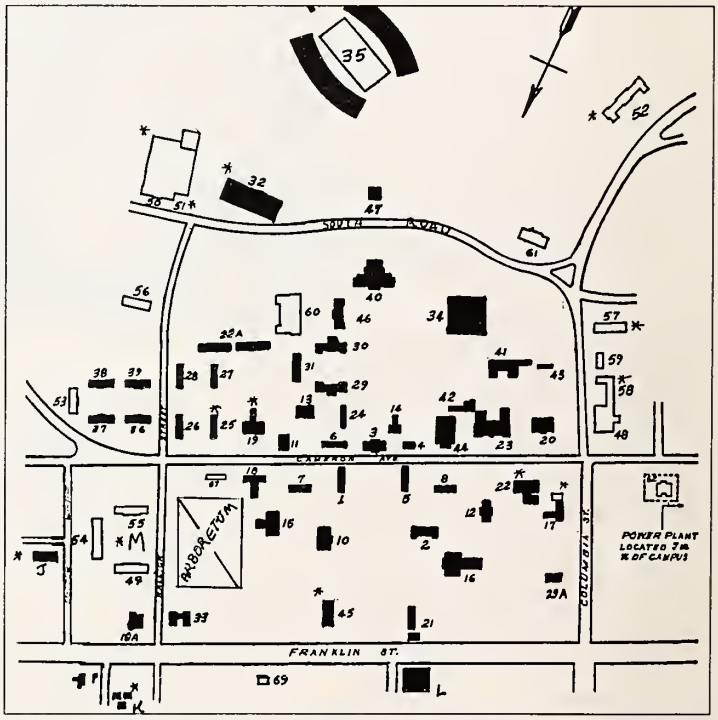


Figure 1. Campus, University of North Carolina, 1938 - 1940.

Buildings shown as solid figures were constructed prior to 1930. Those in outline were constructed predominantly during the mid-1930s with Federal assistance.

Buildings that appear in the text are numbered and asterisked(*): Caldwell Hall (19); MacNider (52); Grimes Dorm (25); Home of Louis Graves (J); Women's Quadrangle (M); Graham Memorial (45); Swain Hall (22); Cheltenham Place (K); Infirmary (17); Carolina Inn Cafeteria (58); Woolen Gym (50); Bowman Gray Pool (51); Tin Can (32); Whitehead Dorm (57).

From the Department of Pathology, School of Medicine, The University of North Carolina, Chapel Hill 27599-7525. Illustrations by Ernest Craige, M.D.

The class organized itself into five-person teams for traveling, one student in each group providing a car. Almost all of us lived in Whitehead dormitory where a telephone in the lobby was monitored by the group on call. Calls came at any time of day or night and on weekends, and we loved the feeling that we were now "doctors" prepared to respond to emergencies. The drive to Watts took about 30 minutes, and the autopsy several hours. I do not remember writing up the cases, but each group must have attended at least a half dozen during the year.

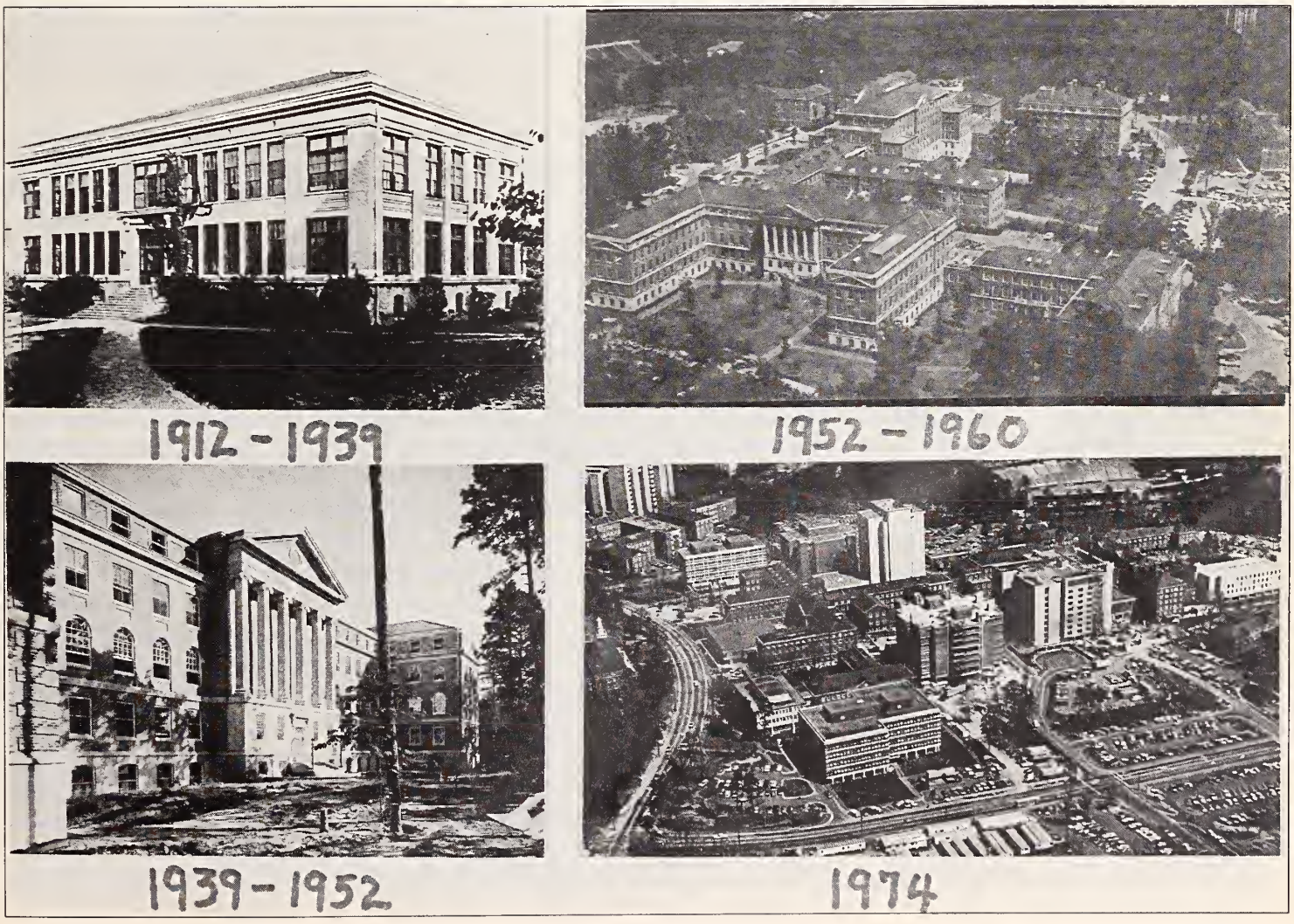
Pathology was taught by Dr. James Bullitt and Dr. Russell Holman with the assistance of Dr. Thomas Byrnes, the pathologist at Watts. In my essay on Dr. Bullitt (NCMJ 1984;45:88-92) I described at length his interesting personality and the details of the course. Russell Holman, later head of Pathology at Louisiana State University, was the junior member of the department and was very engaging. It was primarily Holman whose example attracted me into Pathology.

Pharmacology lectures were given by Dr. William deBerniere MacNider, and Dr. Gus Donnelly was in charge of the laboratory. Dr. MacNider was Dean, although his Assistant Dean (Dr. Berryhill) did all the administering. Dr. MacNider was our most famous faculty member and had been made a Kenan Research Professor to retain him locally when he had been offered a chair at Duke in the late 1920s. He was widely known and traveled: a member of the National Academy of Sciences, the Association of American Physicians, the American Philosophical Society, and President of the Society of Experimental Biology and Medicine. He was also the chief Examiner in Pharmacology for the National Board of Medical Examiners. Since all students at Duke Medical School had to pass National Boards, while none of us took them, he was more threatening to them than to us.

Dr. MacNider was reared in Chapel Hill and had been an undergraduate here. He had also obtained his M.D. degree at UNC in 1904. (During the period 1900-1912, prior to the Flexner report, UNC had provided clinical years in Raleigh.) Dr. MacNider's further training is unclear to me except that he had spent two years in Surgery in Raleigh, a summer at Johns Hopkins in Sir William Osler's clinic, and another summer in the laboratory of Torald Sollmann at Western Reserve. He vigorously promoted the concept of the "biologically minded physician," but I never saw him in the student laboratory.

The Pharmacology lectures were rambling discourses on a variety of drugs and remedies now long forgotten, interspersed with references to Osler and his friends elsewhere. I remember that we had lectures on the theory of mustard

Figure 2. The University of North Carolina School of Medicine





... the interrogation continued until the student got his money's worth. Dr. MacPherson was regarded as a sadist, and was nicknamed "Skee-ball."

plasters, stomachics, and *veratrum viride*. (When Dr. MacNider retired he taught a course in medical history which I understand was not basically different from his Pharmacology course.) The laboratory was similar to the Physiology laboratory of our first year. In it we observed the effect of various drugs on anesthetized animals. We did not take these exercises very seriously, because no one bothered to explain their relevance, and the faculty member in charge was regarded as something of a lightweight.

There was not a decent textbook of Pharmacology in 1939. When the first edition of Goodman and Gilman appeared the next year, it was an instant worldwide best seller. The only drugs of any real clinical value seemed to us to be digitalis, morphine, aspirin and salvarsan. Dr. MacNider was respected as a person, but his course was not feared. Like Dr. Manning, the fraternity examination files on him were very complete. Dr. Donnelly told me that he and Dr. MacNider were quite surprised at the high quality of my final examination. They had not considered me to be in the first rank of Pharmacology students. What they did not know was that I was in the first rank of students of old Pharmacology examinations. All 12 of their essay questions—choose any 10—had been used previously.

Bacteriology was both the best-taught and most stressful course of the second year, Dr. MacPherson teaching socratically. There was a good textbook, and he assigned a chapter for each class session. Each period he meticulously quizzed two students for 20 minutes each. The choice of quizee was apparently random, but we never knew whether a prior appearance provided immunity. As a result, we carefully prepared for each session. Invariably the entire information possessed by a student on any topic was fully extracted long before the 20 minutes were up, but the interrogation continued until the student got his money's worth. Dr. MacPherson was regarded as a sadist, and was nicknamed "Skee-ball." I remember Howard McFadyen, a 200-pound former wrestling champion who sat behind me, trembling while waiting to be called on to testify. "I'd rather be drafted than go through any more of this," I remember him muttering one day. But we really learned Bacteriology!

Mike Rolnick, the laboratory assistant, and Dr. MacPherson imprinted me very strongly. Five years later when I was seconded temporarily to an Army Station Hospital on Saipan and placed in charge of the bacteriology laboratory, I found that I could handle most of the work with what I had learned from them plus a lab manual.

Pharmacology and Bacteriology mercifully ended the first semester and we now really entered Clinical Medicine. This was the course in Physical Diagnosis taught by Dr. Berryhill. (In my essay on Dr. Berryhill [NCMJ 1984;45:619-

25] I describe this austere man and his proficiency as a clinician.) We bought stethoscopes, which we carried with us everywhere, "carelessly" displayed. (There were no white-coated residents competing with us in Chapel Hill in those days.) Dr. Berryhill and the Infirmary staff—Drs. Ed Hedgpeth, Bill Morgan, and Robert Stone—showed us how to do physical examinations, and Dr. Berryhill gave the lectures. Each of us wrote an essay correlating the symptoms and lesions of some condition, and I recall writing on lobar pneumonia. But the most exciting part of Physical Diagnosis was seeing live patients.

In our teams of five we traveled by car to hospitals in Durham (Watts and the County Home) and to the sanatorium at Montrose near Pinehurst (where the Wilson County ABC store, 100 miles away, operated a liquor store for the rich Yankees). We watched Dr. Coy Roberson, head of surgery at Watts, operate. We had lectures in Obstetrics and Gynecology from Dr. Robert (Daddy) Ross of Durham, and in Pediatrics from Dr. Arthur London, also from Durham.

The spring of 1940 was very exciting in many ways. The Germans invaded the Balkans and Scandinavia and knocked France out of World War II. My class knew that we would be at war before too long, and hoped that we could get our M.D. degrees before that happened and thereby avoid infantry duty. What we did not anticipate was that the classes of 1941 and 1942 (ours) would furnish the great majority of the battalion surgeons for the infantry of the Army and Marine Corps, and that two of the 60 students in our two classes, Emmet Spicer and Arnold Breckenridge, would lose their lives in service.

Student Activities

Student government in the medical school was a part of university student government. Coming from Davidson, which also had an Honor System, I understood that cheating on exams was a heinous crime. But the matter of reports of laboratory experiments was more ambiguous. Was it a violation for one lab partner to copy the report of another when the results had been obtained jointly? We never knew. John Woltz, who had attended UNC as an undergraduate, was the designated Honor Chairman for the med school. Happily there was not a serious problem in my class, but John trapped a miscreant in the class after mine who was expelled for cheating.

The officers of the medical student body (Whitehead Society) earned these positions academically. Their duties were light, and as Secretary-Treasurer (third ranking scholar) I remember visiting an office in Graham Memorial once or twice to get permission to spend money which must have originated as student fees and was, therefore, under State control. Class officers were popularly elected and were supposed to provide the channel for official communication with the authorities. I was elected President of my first year class, and Abe Conger was, I think, President of our class the second year. Neither of us was burdened by our responsibilities.

Most of the power lay in the medical fraternities. Their most important assets were files of previous examinations in all courses. There had been three fraternities prior to the arrival of Dr. James Andrews: the Phi Chi, the Alpha Kappa Kappa, and the Theta Kappa Nu. Phi Chi was the largest and composed mostly of UNC students who had belonged to undergraduate fraternities. The AKKs and TKNs were mostly non-fraternity UNC students and students who had entered from elsewhere. When Bull Andrews flunked one-third of the class preceding ours his axe had fallen disproportionately on the much smaller AKKs and TKNs. In fact, the TKNs never recovered and disappeared after 1939. The medical fraternities continued to exist until at least 1952, but seem to have disappeared when the clinical program was instituted. But the fraternities provided us with a degree of camaraderie, and Phi Chis had a sort of educational program. In addition to the Christmas conclave, the fraternity gathered each Sunday evening in an upstairs room at the Graham Memorial for refreshments and to entertain a visiting speaker, usually a member of the faculty or an invited practitioner.

My class knew that we would be at war before too long ... What we did not anticipate was that the classes of 1941 and 1942 (ours) would furnish the great majority of the battalion surgeons for the infantry ...

The law students accepted the political dominance of the medical students in their joint social enterprise, Law-Med Weekend. Since Phi Chi was the powerhouse of the medical school, they ran it also. The old Tin Can (#32 in figure 1) was rented for two nights of revelry, and a band was hired, competitively, to provide music. The competition consisted of who would give Phi Chi the best deal. Under the ancient practice of *droit de seigneur*, a band had to agree to play for a private dinner dance of the Phi Chi at the Carolina Inn without charge. I remember being responsible for the gin punch at the banquet in 1940. Having tasted so deeply in

I remember being responsible for the gin punch at the banquet in 1940. Having tasted so deeply in getting the mixture "right," I could not discover the correct key for Abe Conger's quartet in which I was supposed to sing lead.



getting the mixture "right," I could not discover the correct key for Abe Conger's quartet in which I was supposed to sing lead. My other recollection is that the Sunday after Law-Meds in 1940 was very quiet in Whitehead Dormitory. Everyone was nursing a bad hangover!

Transferring

From 1912-1952 the medical school transferred a class of students each year to a wide range of four-year schools for their clinical education. Transfer was dependent on grades and recommendation of the Dean. Preoccupation of second year students with transfer began when school opened in the fall. Sometime in October or November Dr. Berryhill let each of us know about what he could expect, then left the rest to us. There was a distinct pecking-order of schools. Any student from those days could guess the relative class standing of any other by the school to which he transferred.

Harvard had pride of place. The second tier included Penn, Johns Hopkins, Yale, Columbia, Cornell, Chicago, Washington University, Vanderbilt, and Emory. The third tier consisted of Jefferson, George Washington, Northwestern, Western Reserve, Maryland, and Tulane. The fourth tier consisted of Louisville, Louisiana State University, Medical College of Virginia, Charleston, and Georgia. Not all students who managed to pass their courses managed to transfer. The recommendation of the school was also required, and some died on the vine.

There were six other two-year schools in 1940: Missouri, Dartmouth, North Dakota, South Dakota, Alabama and Wake Forest. UNC was proud that it transferred as many students to Harvard as any other and more than most. The problem of transferring to Harvard was that a decision was not made until Easter. I simplified the transfer problem by convincing myself that it really didn't matter which school I finished at, provided it was no lower than the second tier and would give me an answer by Christmas. Although two of my ancestors had graduated in medicine from Penn and my grades would have gotten me into Harvard, I elected to go to Cornell. This was largely because Emmet Spicer from the class before mine and from my hometown had done so, and Cornell gave me an answer in December. All my classmates transferred as far as I know. Only one of them flunked out of the clinical years, probably because he had transferred to a second-tier rather than a fourth-tier institution.

Transferring was traumatic. Although we were well-taught, each recipient institution had its own character, and its students had had experiences somewhat different from ours. Furthermore, as a group we had not been the top cut of pre-medical students. The result for many transferees was "culture shock" in an unfamiliar urban environment. This was lessened somewhat for those who transferred in a group with three or four others, and was least at Harvard, which had developed a summer program to orient transferrees. But Cornell, Columbia and Johns Hopkins, which received them rarely, did not bother. Orientation was the student's responsibility.

Life in Whitehead Dormitory

Student life our second year was different from our first, because a "medical student dormitory," Whitehead (named for the first Dean), opened in the fall of 1939. Almost all the men, plus a few graduate students, lived there and it resembled life in a large fraternity. We were in and out of each other's rooms, shared common showers and toilets and a suite of parlors on the ground floor. Most of our time was spent studying, but the weekends were unscheduled. We played touch football on the lawn out front, and there was a good bit of practical joking: such things as throwing a lighted cherry bomb over the transom of another's room, or leaving the lights on all night to simulate studying in order to tease the weaker students. I remember once putting a chipmunk in Bill Raby's bed, mad because he had been spending most of his evenings courting at Kenan Dorm instead of writing up our lab experiments. The hall, which had been informed, remained awake and roared with laughter when he finally got in bed, the varmint ran up his leg, and he screamed.

The medical school entered teams in many intramural sports, and our softball team was the champion of our division in 1940. I played second base, indifferently, and was saved by the shortstop, Hank Guynes, who was ambidextrous and could move easily in either direction.

The University decreed in 1940 that there would be a "break" between the first and second pair of courses each morning. This meant that we had a 20 minute recess during which we had to find something to do. This evolved into a daily game of "pitch penny" in front of the medical school building. One day while we were pitching, Dr. Rosenau, the urbane Dean of the School of Public Health and formerly Dean at Harvard, walked up.

"What's going on, boys?"

"It's 'pitch penny,' Dr. Rosenau."

"How do you play it?"

We explained the rules and he asked to be allowed to join us. We eagerly assented, sensing that we had hooked a sucker. To our astonishment, he won every pitch until all the coins were in his pocket. He thanked us politely for teaching him how to play and strolled on into the building. It was some weeks later before one of us learned from his associate, Dr. Harold Brown, that Dr. Rosenau had once been marooned in the Amazon for several weeks by a flood and the only recreation had been coin tossing.

The undergraduates decided in 1940 to promote better relations with the faculty by a joint spring holiday and festival which they called "Student-Faculty Day." (This still persists, but only in the medical school.) John Woltz and, I think, Dr. Rosenau were appointed Grand Marshals for the Medical School that first year. While the details are hazy, I seem to remember a morning cocktail and swimming party at the new Bowman Gray pool, an afternoon picnic at Hogan's lake, and an evening dance at the Graham Memorial. This may not be entirely correct, but John was a Sigma Chi who liked to live it up, and Dr. Rosenau was sophisticated and widely traveled. Such a scenario would have been entirely consistent with their ways of doing things.

Transportation in Chapel Hill was primitive but effective in 1940. We walked. For autopsies and to get to hospitals elsewhere, we paid someone—in my case Sam Hatcher—one cent a mile to drive us. Sam actually made money with his second-hand car. Sam was a bit of an entrepreneur, and when we transferred to New York City the next year, he permitted me to come down from 68th to 26th St. once a week to enjoy a home-cooked dinner with H.B. Barnwell and himself. It was clearly understood that I was to pay 45 cents a meal—which often featured biscuits, gravy, and country-fried steak. The food was equivalent to Swain Hall's best and, if it had been available at the Automat, would have cost at least $2.

Transportation in Chapel Hill was primitive but effective in 1940. We walked.

Pathology, Clinical Pathology, Immunology, Physical Diagnosis etc., finally ended in the spring of 1940 and, transferring having been successful, I departed for the summer. I had arranged to be the Assistant Doctor at Camp Morehead and went to the beach again for the last time. I was on top of the world, because I was carrying a report card with a cryptic marginal note from Dr. Berryhill (in his illegible handwriting) which seemed to say that I had performed academically better than any of my classmates.

It was my completely unanticipated success at Chapel Hill preceded by a not very happy stay at Davidson and succeeded by the unpleasantness of New York City which made Chapel Hill so important to me. It became a special, almost magical, place in my imagination and led me to decide to spend the rest of my life there if I could. It was an especial thrill, therefore, when I received a letter in Japan in 1946 from Dr. Holman, newly appointed Head of Pathology, asking whether I should like to return and join him. In point of fact he was long gone by the time I arrived, and Dr. Bullitt had had to return from retirement to fill the gap temporarily. Dr. Berryhill assured me, however, that I had a position (at $300 a month), and I have never regretted returning. ❑

Letters to the Editor

Comments on the Special Issue on Preventive Medicine (November 1990)

To the Editor:

I write to commend you and the Guest Editor, Ron Levine, on the November Special Issue on Preventive Medicine.

This issue has my favorite Norman Rockwell painting on its cover of a small boy confidently awaiting his "shot" while looking at the doctor's diploma. I have referred to this painting many times as graphically portraying an ideal doctor-patient relationship. The small boy obviously has complete confidence in "his doctor," though he may not understand the diploma, and calmly awaits the worst, knowing everything will be all right.

More importantly, this special issue addresses well so many preventive and public health problems which face physicians and the public daily. You are good to devote a special issue to these important, continuing, and all-too-often expanding problems.

Certainly, "we treat in retail, but prevent wholesale," and it is rewarding to see our state and the nation turn more attention, efforts and resources to preventive medicine.

James E. Davis, M.D.
General Thoracic and Vascular Surgery
Suite 402 - 2609 N. Duke St.
Durham, NC 27704

To the Editor:

When I come upon a good thing, I like to spend time relishing the joy it gives me. Such an event now regularly occurs with the arrival of the *North Carolina Medical Journal*.

This month, however, was particularly good because of the articles assembled by the Guest Editor, Dr. Ron Levine.

I have enjoyed Family Practice for 37 years and have always stated that the cornerstone is preventive family medicine. Such a bias makes it even more enjoyable to read these excellent (and timely) articles. Congratulations to Dr. Levine, and to the editorial staff for having the insight to extend that invitation to him.

Millard W. Wester, Jr., M.D.
Henderson Family Medicine Clinic, P.A.
1912 Ruin Creek Rd.
Henderson 27536

To the Editor:

I would like to add another recommendation to Dr. Thad Wester's 20 recommendations of the Task Force on Injury Prevention (pp. 566-8).

21. Teaching basic first aid in the schools and having a basic first aid chart in every telephone directory which is usually readily accessible in most homes.

Jay M. Arena, M.D.
Director Emeritus, Poison Control Center
Duke University Medical Center
Durham 27710

End-of-life decisions

To the Editor:

A recent discussion of end-of-life care with the Medical Society of a nearby county reminded me of the distance that often separates what is published in the medical literature from the realities of practice in the community. From what we read we might assume that physicians are now making discussions of end-of-life care, living wills and other advance directives for medical affairs a part of the routine care of their patients. This is certainly in keeping with the published guidelines of our own state Medical Society and a reasonable response to the Nancy Cruzan case. But are these guidelines actually in use and do they have the support of the practicing physician?

I heard a definite "No" from this group of hard working practitioners. They had serious misgivings about current legal and ethical trends regarding terminal care, and lump living wills with all the other unwanted and unneeded regulation of medical practice. Our legislators should be interested to learn that not a single physician could recall finding a living will useful in the management of a terminally ill patient. One doctor, in the process of closing his practice, wondered what to do with the hundreds of signed living wills lying around his office, and others agreed that living wills can be easily lost or buried in the patient's chart. Generally, it was agreed that doctors know what is best for their patients and should have the "guts" to act without resorting to a living will. The implications for our lawmakers is obvious if these views are widely shared by North Carolina physicians.

I found more support for the concept of a durable power of attorney for health affairs. However, few felt that physicians are responsible for initiating discussions of end-of-life care and it was agreed that, in reality, there just wasn't enough time

to get all this talking done. The need to conduct these discussions was also questioned by physicians who feel they already know what their patients want and what is best for them. Patients who want a lengthy discussion should be referred to a lawyer.

These busy doctors viewed the patient's family as an unwanted hindrance to the care of incompetent patients. They told me that doctors should have the fortitude to do what is right for the patient regardless of the family. One physician defended the practice of keeping the family out of the decision making process by asking, "How much guilt can this society take?" Another said that, "A doctor should know when a patient is dead or alive and act accordingly without asking for the family's permission."

But what about the fact that many patients and families fear that they will be kept alive artificially against their wishes? That like Quinlan and Cruzan their humanity will be eclipsed by the blind application of medical technologies? That a feeding tube will be inserted because their doctor never inquired about their wishes when they were competent? Do doctors understand the nightmares that plague our patients and their families?

The doctors I met seemed preoccupied with nightmares of their own and had little interest in discussing the plight of their patients. They see their practices threatened by government restrictions, bickering and unreasonable families, and demanding schedules. To them the assertion of patient autonomy in end-of-life decision-making was perceived as yet another threat to the autonomy of the doctor.

Driving home that night I wondered what action we as a community should take when the distances that separate patients, doctors and public policy are so great. Finding a consensus will not be easy. Emotions run high when people, be they doctors or patients, feel that what they value is threatened. And these doctors feel that our profession is, in fact, gravely threatened. This is anything but a trivial matter. Hopefully, the sense of peril will diminish as understanding increases; as the values that bring us together and those that drive us apart are clarified. This process will require careful attention to how we talk to each other and how we listen; skills that, unfortunately, many physicians do not practice or value. A meaningful public policy regarding end-of-life care that matches the realities of daily practice will be worth the effort.

Peter R. Lichstein, M.D.
Section of General Internal Medicine
Department of Medicine
ECU School of Medicine
Greenville 27858-4354

Primary care practitioners: "endangered species"

To the Editor:

On the occasion of announcing my retirement from solo, family medical practice in Fayetteville, since 1974, I am moved to share the following comments.

My decision to change to the full-time practice of occupational medicine with The Dow Chemical Company, Midland, Michigan (my home state), was easy in some ways, but not in others.

Non-procedurist, primary care practitioners are becoming members of an "endangered species" for a variety of reasons which are well known to those of us in the field and some others. Our friends and neighbors (the patients) are in need of these inadequately nurtured and compensated services. In my view the quality and availability of primary care services is in sufficient decline that organized medicine and legislators at all levels should "heed the call" or patient care will suffer.

I will certainly miss my patients, colleagues, and friends in North Carolina, where I have tried to "bloom where I was planted" for twenty years.

Thomas B. Woodworth, M.D.
Woodworth Medical Services, P.A.
1657 Owen Dr.
Fayetteville, NC 28304

Doctor seeks stop-smoking information

To the Editor:

I am currently editing a book concerning smoking and how to stop. I would like to inquire of the methods of breaking this habit suggested by individual physicians and the effectiveness of these methods. I would like to also know the patients' ratings of these different methods and even their own methods.

Claude A. Frazier, M.D.
Doctors Park - Bldg. 4
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Authors interested in more effective writing may find *The Elements of Style* by Strunk and White and *How to Write and Publish a Scientific Paper* by Day helpful.

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January 24-26, 1991
Geriatric Update 1991
Place: Chapel Hill
Credit: 18.7 Category I AMA
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

January 24-26
Womack Society Meeting
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

January 30, 1991
Second Annual North Carolina Conference on Injury Prevention
Place: Raleigh
Fee: $30
Info: Phylliss Woody, Registrar, Office of Continuing Education, UNC School of Public Health, CB #8165, Miller Hall, Chapel Hill 27599-8165. 919/966-4032

March 1
Update on Anxiety Disorders
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

March 1-2
Functional Neuroscience: A Review and Update
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

March 7
How to Manage a More Profitable Practice
Place: Raleigh
Info: Director, CME, Southern Medical Association, 35 Lakeshore Dr., PO Box 190088, Birmingham, AL 35219-0088. 1-800/423-4992

March 20
43rd Annual Scientific Assembly
Place: Research Triangle Park
Credit: 16.25 hours, AAFP
Fee: $195
Info: Marietta Ellis, NC Academy of Family Physicians, P.O. Box 18469, Raleigh 27619. 919/847-6467

March 21-22
The 15th Annual Symposium of the Lineberger Comprehensive Cancer Center - "Molecular Basis of Cancer Therapeutics"
Place: Chapel Hill
Info: Public Information Director, Lineberger Comprehensive cancer Center, UNC School of Medicine, CB #7295, Chapel Hill, NC 27599-7295. 919/966-3036

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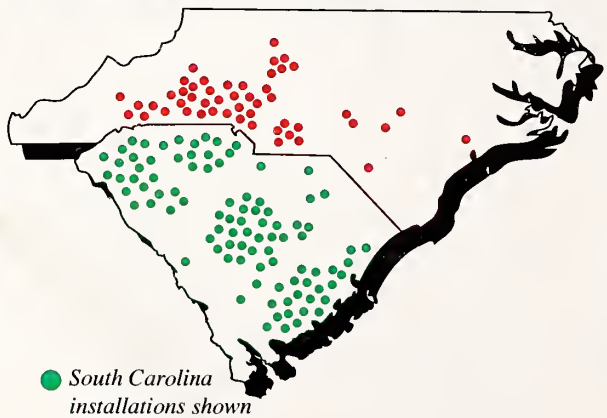
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North C Medical Journal

For Doctors and their Patients



Irene Roderick

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- **The Financial Impact of the High Tech Newborn**
- **Infant Mortality in Durham County, 1989**

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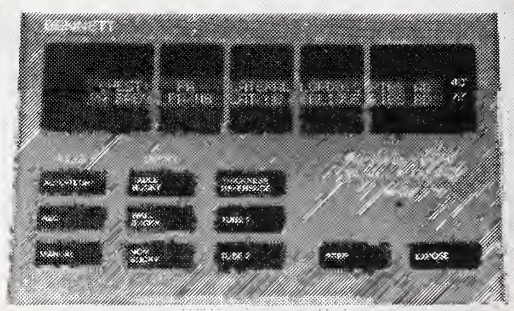
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North Carolina Medical Journal

FOR DOCTORS AND THEIR PATIENTS

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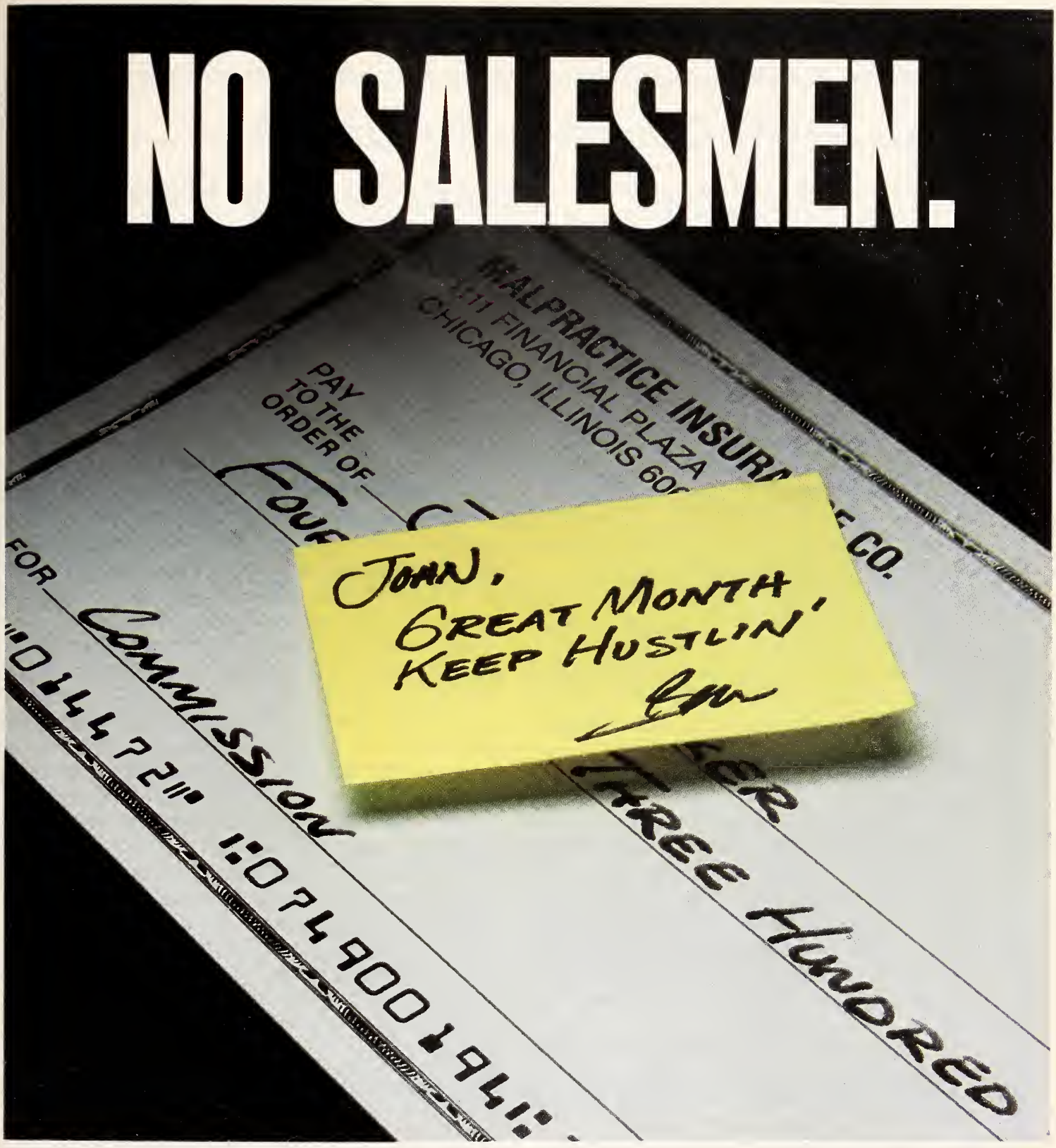
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EDITORIAL

Death with Dignity: Autonomy Acknowledged = Opportunity Created

George C. Barrett, MD

A wise man will make more opportunities than he finds.
—Francis Bacon (1561-1626): *Essays*
"Of Ceremonies and Respects"

Mouth-to-mouth resuscitation[1] and closed chest massage[2]—described in 1957 and 1960, respectively—mark the onset of our ability to support the mechanics of life. Thirty years ago we were taught that as physicians we were obliged "to do everything" for a patient. "Everything" was not much, however, and it did not needlessly prolong dying. But today we have ventilators, artificial hydration and nutrition, dialysis machines and other miraculous products of an ever-expanding technology that can support the mechanics of life seemingly ad infinitum.

Society claims that we physicians fail to acknowledge death as a part of life and that this failure causes us to impose unnecessary suffering on our patients. As we use the high-cost technology available to us, we cause resources to be consumed, resources that are finite and that could be used to prevent illness rather than prolong dying. Most physicians now agree that patients have a right to participate in the decisions regarding their medical treatment, including decisions about how their life will end.

At the 1990 Spring Conference in Pinehurst, the North Carolina Medical Society's Bioethics Committee authorized the creation of a subcommittee to develop advance care directives (ACDs) for patients and physicians. (The Charlotte-based Bioethics Resource Group kindly granted the Committee permission to use its ACDs as a guide for developing directives that could be used statewide.) The subcommittee* was chaired by the author and included physicians, an ethicist, a chaplain, attorneys and representatives of six organizations intimately involved in the care of dying patients.

From the Department of Radiology, Presbyterian Hospital, P. O. Box 33549, Charlotte 28233-3549. Dr. Barrett is Chairman of the North Carolina Medical Society's Bioethics Committee.

The Bioethics Committee wisely felt that the ACDs should have input from all healthcare providers who would be affected by them and that they would be more broadly accepted by all healthcare providers if perspectives of each of them were included. Thus our subcommittee was multidisciplinary and broadly based.

The subcommittee was divided into two groups: the ACD group was chaired by C. Glenn Pickard, MD, Professor of Medicine at The University of North Carolina-Chapel Hill, and the out-of-hospital do not resuscitate (DNR) group** was chaired by Donald E. Vaughn, MD, a member of the American College of Emergency Physicians.

Our meetings were held on Sundays in Chapel Hill. At the initial meeting a sense of group rapidly developed and a unified purpose was immediately evident: to develop a document that would help patients, while healthy, make decisions about how they wanted their life to end or, sometimes more importantly, how they did *not* want their life to end.

* Members of the subcommittee included from the North Carolina Medical Society: George C. Barrett, MD, Donald E. Vaughn, MD, C. Glenn Pickard, Jr, MD, David Lennon, MD, Darlyne Menscer, MD, William J. Stewart, MD, Kathleen A. Cline, MD, Patricia K. Hodgson; from Hospice of North Carolina: Judy Lund; Rosemarie Tong, PhD, from Davidson College; Attorneys Julian D. Bobbitt, Jr, JD, Keith Korenchuk, JD, and law student Christa Speight; from the Office of Emergency Medical Services: Bob Bailey; from the North Carolina Health Care Facilities Association: Vickie Haywood, RN; from the North Carolina Hospital Association: Wyatt E. Roye; from the North Carolina Association for Home Care: Gary Bowers; from the North Carolina Nurses Association: Jane Castle, RN; and The Rev. D. Scott Lindsay, DMin.

**The out-of-hospital DNR document developed by the Vaughn group will be presented in a later issue of the *Journal* and *Bulletin*.

Preliminary working papers were developed, modified by mail, modified further by telephone, and creatively modified by Penny Hodgson of the NCMS staff. The work of each group was shared with and reviewed by its opposite number. Finally at the second session all the knots were untied and a paper was produced. The experience was a remarkable demonstration of the synergy that can result when individuals work to a common goal for the good of the commonweal.

The document was submitted to the Bioethics Committee, approved unanimously, and subsequently approved unanimously by the House of Delegates of the North Carolina Medical Society at its November 1990 meeting.

Enclosed with this issue of the *Journal* and *Bulletin* is that document: *The Layman's Guide to Death with Dignity*. It is written in language patients can understand with physicians' help. It includes a form for a living will, a form for appointing a surrogate for healthcare matters, and a form about medical choices for patients to discuss with their physician (ACD). The medical directive provides you an unusual opportunity to discuss in general and specifically what control your patients want to exercise over the end of their life. It should be clearly understood by patients that the medical directive will provide guidance to the caregiver in non-terminal but incurable illnesses. The living will applies only in the case of terminal illness. Thus the medical directive becomes critical for guiding the caregiver and the family or surrogate. The medical directive checklist includes a broad spectrum of therapeutic interventions the subcommittee felt should be discussed. Some of them (e.g., nos. 6 and 10) are designed to be "starters," i.e., points of beginning discussion, and should be viewed as such. The checklist should not be viewed as all-inclusive and patients should understand that it is not meant to be. It is critical, in fact, for patients to understand that medical directives cannot possibly cover all medical circumstances and that they should therefore name a surrogate for making their healthcare decisions. The form for that purpose is easily as important as the living will.

While many patients acknowledge the desirability of having a living will, few have executed them. Patients are also reluctant to discuss death with their physicians, despite evidence that they do not trust us to let their life end with dignity. We physicians, on the other hand, are often reluctant to acknowledge that death is simply a part of life. *The Layman's Guide* will help obviate the difficulties both patients and physicians have when they approach the subject of dying. It may also help diminish the need some feel for an active euthanasia law in the United States.

The Layman's Guide is structured in accordance with recommendations from the American Bar Association. We were given valuable assistance and guidance in that regard by subcommittee member Julian D. (Bo) Bobbitt, a healthcare attorney with the firm of Smith, Anderson, Blount, Dorsett, Mitchell & Jernigan in Raleigh. His dedication to the issues and concerns addressed by *The Layman's Guide* is further manifested by his willingness to write the accompanying editorial concerning its legal implications (page).

Beginning November 1 of this year, healthcare facilities that treat Medicare and/or Medicaid patients must advise patients of their right to sign advance directives for healthcare decisions. This new requirement is a result of the Patient Self Determination Act, passed by the United States Congress near the end of its 1990 session. If organizations representing healthcare givers in other states had acted as we have in adopting *The Layman's Guide* in North Carolina and relinquishing some of our autonomy for our patients' good in the process, the Act would not have been necessary. *The Layman's Guide* can and should be used statewide so there will be a minimum of confusion for patients.

The Layman's Guide to Death with Dignity is available free (except for handling and delivery charges) and in large quantities to members of the North Carolina Medical Society and the North Carolina Hospital Association. Any other individual who requests it in writing from the NCMS and is willing to send $1 to cover the cost of printing and mailing may also have a copy.

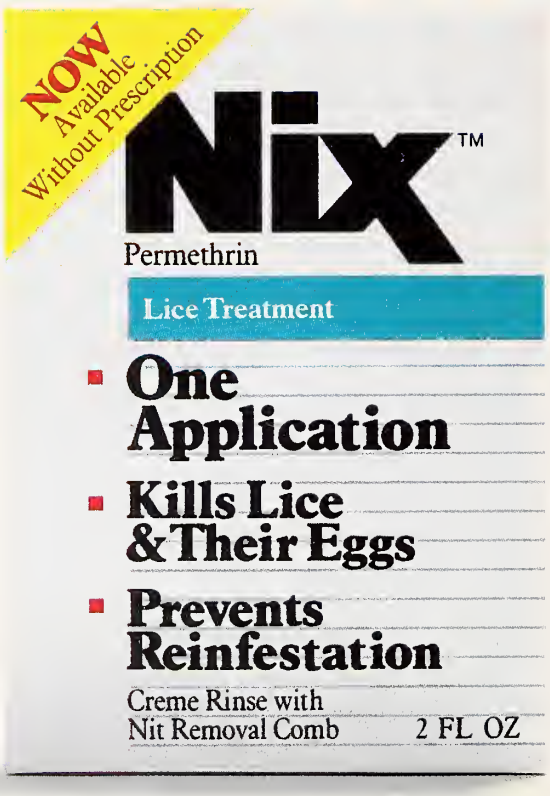
The patient's freedom to participate in decisions about the end of life is fully acknowledged by *The Layman's Guide*. This freedom will carry with it an obligation on the part of your patients to inform you of their wishes if you make *The Guide* available to them. Avail yourself of the opportunity created by the North Carolina Medical Society. Make copies of The Layman's Guide available to your patients. Take the time to listen and talk with them about it. In the long run it will save you time and trouble. In so doing you may be not only healer but priest to your patients. This is what they want. ❑

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1 Safar P. Mouth-to-mouth airway. Anesthesiology 1957;18:904.

2 Kouvenhoven W, Jude J, Knickerbocker G. Closed chest cardiac massage. JAMA 1960;173:1064.

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EDITORIAL

Death with Dignity: Advance Directives Remove Legal Uncertainty

Julian D. Bobbitt, Jr.

"(C)ompetent persons generally are permitted to refuse medical treatment, event at the risk of death."
—from the U.S. Supreme Court's *Cruzan* opinion[1]

The law recognizes an individual's fundamental right to control decisions relating to his or her medical care.[2] Most recently, the United States Supreme Court, in considering Nancy Cruzan's right to die, asserted the right of an alert adult to refuse to consent to care, even life-saving care.[3] The hitch, of course, is that most patients are not alert or even conscious when the time comes to express their desire to die naturally as opposed to having their life prolonged artificially through medical technology. Advance care documents, such as are found in *The Layman's Guide to Death with Dignity*, can bridge that gap. They can honor the patient's right to die by preserving the powerful invocation of that legal right made by the patient while alert and carrying it forward to the time needed. They are among the best tools available to preserve patient dignity and autonomy.

Had Nancy Cruzan executed an advance care document covering her situation, she and her family would not have suffered their three-year ordeal while the courts wrestled with her fate. Those involved with the terminally ill in North Carolina have experienced emotional and legal uncertainty when trying to discern the desires of their comatose and hopelessly ill patients who have made no advance expression of wishes to family members or trusted friends. Although North Carolina law strongly supports the right to die, and allowing it is perfectly legal without an advance written expression of intent, advance care documents safeguard that right while removing the burdens on caregivers and family. For these reasons, any and all prior expressions of desires are to be encouraged. Personally speaking, the best documents available in North Carolina for that purpose are in *The Layman's Guide to Death with Dignity*, a copy of which in enclosed with this issue of the *Journal* and *Bulletin*. The remainder of this article addresses specific legal aspects of those documents.

1 The Living Will. This document is officially called a "Declaration of a Desire for a Natural Death" in North Carolina's Natural Death Act.[4] It is a powerful legal document but has limited application. First and foremost, strict adherence to the form is crucial because the form itself is "blessed" in the statute. If the form is followed, those honoring the declaration of a desire for a natural death are given immunity from civil and criminal liability.[5] As *The Layman's Guide* explains, application is limited to a terminal and incurable condition and only extends to limiting employment of *extraordinary means* of life support, as statutorily defined.

2 Medical Directive. While *Cruzan* reaffirmed the broad rights of a *competent* adult to refuse treatment, it went on to say that a state like Missouri could require "clear and convincing evidence" of *incompetent* patients' wishes as to the withholding or withdrawal of treatment. The dilemma in *Cruzan* was that Nancy Cruzan was not an alert, competent adult, but rather was in a persistent vegetative state and, at that time, no "clear and convincing evidence" of her desire for a natural death had been presented. Any prior clear expression would have worked. The reason to have a medical directive is simply to provide such "clear and convincing evidence" and in so doing to remove the legal uncertainty. The Medical Directive in *The Layman's Guide* was worked on for months to be understandable, clear and reliable. It has the added benefit of thus being even more "clear and convincing."

3 Designation of Agent for Healthcare Decisions. It is the *patient's* right to die. Because the patient can rarely communicate when the time comes to make decisions about artificial, life-prolonging treatment, the law has conjured up ways for the patient's surrogate to speak for the patient. In

From Smith, Anderson, Blount, Dorsett, Mitchell & Jernigan, P.O. Box 12807, Raleigh 27605.

lawyer-speak, this is a necessary but elaborate "legal fiction." The movement countrywide toward proxy designations is grounded in simple logic: Instead of lawmakers and judges setting sometimes inappropriate rules about who is best suited to be the patient's surrogate, why not let the competent patient decide ahead of time? The proxy form is, again, compelling evidence of the patient's wishes, this time the identity of his or her surrogate to make certain healthcare decisions in certain circumstances. It can be used in concert with a living will and medical directive, with the agent exercising specific decisions within the broad parameters of the care the patient has designated in the directive. The law has long looked to a patient's surrogate or representative in the right to die setting; a prior designation by the patient of his or her own representative improves the accuracy of this process.

The proxy form is not, however, a durable power of attorney. We wish it were. The medical and legal communities are working in alliance to convert the proxy form, or something similar, into a durable power of attorney through legislation. Caregivers on the scene look to the wishes of the dying patient or an appropriate representative. Ninety-nine percent of the time, the specific evidence contained in *The Layman's Guide* documents is all that will be needed. We are working on that last one percent with legislation.

Good legislation would address how to remove a surrogate who becomes incapacitated or is proven unfit. It would be an opportunity to mesh exactly with probate laws. It would reaffirm the state policy favoring patient autonomy and offer assurances of civil and criminal immunity to physicians who follow the surrogate's instructions. Legislation would increase public awareness of advance care documents. In sum, legislation would slightly enhance the healthcare agent selection process, but it is not necessary.

Only 56% of adult Americans have even discussed natural death with anyone, and only 15% have a living will. Physicians and others in positions of trust should inform their patients of these powerful tools to help ensure a life, and death, with dignity. ❑

References

1 *Cruzan v. Director, Missouri Department of Health*, 111 L.Ed.2d, 224, 238, quoting *In re Conroy*, 98 NJ 321, 486 A2d 1209 (1985).

2 N.C. Gen. Stat. § 90-320; C*ruzan* at 235.

3 The C*ruzan* court traced the common law doctrine of informed consent of a competent adult to refuse medical treatment, the federal constitutional liberty right to refuse treatment, and suggested that state courts had additional grounds to support this right (state constitutions, state statutes, and other common law doctrines).

4 N.C. Gen. Stat. § 90-321.

5 N.C. Gen. Stat. § 90-321. Note, however, that a physician is not *required* to honor a living will, but simply *may* without fear of liability.

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Alcohol Deficiency, Stress Hormones and Bad Acidosis: aka AKA

Jonathan C. Fox, M.D., Ph.D., and David C. Whitcomb, M.D., Ph.D.

Severe acidosis is a potentially life-threatening condition that requires rapid diagnosis and treatment. Available therapeutic options include intravenous fluids, sodium bicarbonate, assisted ventilation, and drugs. Appropriate therapy for acidosis differs according to its severity, underlying cause (metabolic vs. respiratory, exogenous vs. intrinsic), and duration (acute vs. chronic). Despite the broad differential diagnosis, in practice only a few simple clinical observations and common laboratory tests are required to establish a presumptive diagnosis and initiate appropriate treatment while a more detailed evaluation is in progress. Consider the following case of alcoholic ketoacidosis (AKA) in a 43-year-old woman presenting with a complaint of "asthma."

Clinical Case

The patient presented with a two-day history of crampy abdominal pain, nausea and vomiting. For several hours prior to presentation she reported progressive dyspnea which prompted her to seek medical attention. She denied any chronic medical problems. She stated that she occasionally drank beer but denied consumption of hard liquor. She denied any illicit or parenteral drug use, consumption of nonbonded alcoholic beverages, frequent or overuse of nonprescription analgesics or other drugs, or exposure to toxins.

Initial physical examination revealed an alert, well nourished woman who was tachycardic (135), tachypneic (32), and hyperpneic (Kussmaul pattern). She was afebrile (94.8F) and mildly hypertensive (156/98mmHg). She was hyperemetic and had the distinct odor of acetone on her breath. Her lungs were clear and abdomen nontender. An arterial blood gas was immediately obtained and revealed a pH=7.17, paO_2=119mmHg, $paCO_2$=11mmHg, and HCO_3=3.9mEq/l. Stat labs included a plasma glucose=134mg/dl, and electrolytes including Na=140mmol/l, K=4.5mmol/l, Cl=97mmol/l and HCO_3=2mEq/l; the calculated anion gap was 41. Blood urea nitrogen was 20mg/dl and the plasma creatinine reported as 3.5mg/dl. Complete blood count showed the Hb=15g/dl, Hct=0.43, platelets=552,000/mm³ and WBC=33,900/mm³; differential showed 82% segs, 15% bands and no abnormal cell types. The urine was clear and dipstick showed a pH=5.0, with 4+ test for ketones but negative for glucose, bilirubin or protein and with a bland sediment. Radiographic exam of the chest and abdomen were normal.

At this point we had in hand the essential information required to initiate an effective and appropriate treatment strategy. The Kussmaul respiration with low $paCO_2$ immediately excludes a respiratory acidosis. The low plasma bicarbonate (and chloride) results in an elevated anion gap, in this case 41 (normal mean 12±SD=4), indicating the presence of a significant concentration (about 30mEq/l) of anions other than chloride and bicarbonate. A list of potential causes of an anion gap acidosis is given in table 1 (next page).

Differential Diagnosis

The differential diagnosis of an anion gap acidosis (with or without ketonemia; see table 1) has received a great deal of attention because of the potential severity of the illness and the need to establish a specific etiology that directs appropriate management. A normal or nearly normal serum glucose value promptly excludes the most common cause of ketoacidosis, namely type 1 diabetes mellitus. Other causes of anion gap acidosis include renal failure (inorganic acids), tissue hypoxia from shock or mitochondrial poisons (lactic acid), drugs (e.g., salicylates), toxins (e.g., alcohols other than ethanol, ethylene glycol and their organic acid metabolites), starvation, ethanol abuse, or inborn errors of metabolism (the glycogenoses or glycogen synthase deficiency).

From the Division of Cardiology (JCF) and Gastroenterology (DCW), Department of Medicine, Duke University Medical Center, Durham 27710.

Table 1
Causes of Anion Gap Acidosis

Underlying cause	Associated anion	Ketones
Insulin deficiency (diabetic ketoacidosis)	acetoacetate, β-hydroxybutyrate	+
Ethanol "deficiency" (alcoholic ketoacidosis)	acetoacetate, β-hydroxybutyrate	+
Starvation	acetoacetate, β-hydroxybutyrate	+
Tissue hypoxia (septic or cardiogenic shock, seizures, cyanide or carbon monoxide poisoning)	lactate	-
Biguanides (e.g. phenformin)	lactate	-
Polycyclic sugars (fructose, xylitol)	lactate	-
Uremia	phosphates, sulfates	-
Methanol	formate	-
Ethylene glycol	oxalate	-
Salicylates	salicylate	-
Paraldehyde	acetate	-

Modified from Kreisberg and Wood[2]

Clues from the Clinical History

The clinical history may be pivotal to establishing the correct diagnosis. Our patient's acute symptom onset and absent history of renal disease made the diagnosis of uremic acidosis unlikely. This was confirmed by a normal BUN. The creatinine elevation was unrelated to her renal function. Acetoacetate interferes with the widely used creatinine assay and thereby causes artificially elevated values.[1] Patients with uremic acidosis typically have a protracted onset with profound azotemia, but usually are not significantly acidemic because of chronic respiratory compensation. Respiratory insufficiency demands emergency treatment in these patients in order to avoid a rapidly progressive uncompensated acidosis, hyperkalemia, cardiovascular collapse and death.

The history was also important in excluding toxic etiologies. She specifically denied use of aspirin or ingestion of any substance intake that might contain methanol, ethylene glycol or paraldehyde which are the major toxins associated with anion gap acidosis (table 1). She had no history of similar episodes, making an inborn error of metabolism presenting at age 43 unlikely.

Although lactic acidosis may be a consequence of ingesting several of the toxins listed above, severe acidosis is usually caused by tissue hypoxemia and anaerobic glycolysis associated with sepsis, cardiogenic or hypovolemic shock or significant tissue hypoperfusion from vascular compromise. Our patient had no history of cardiovascular disease, shaking chills or fevers. Shock from sepsis or cardiac failure is always a grave concern in the acutely ill patient, but although our patient appeared acutely ill and had leukocytosis, she had no other physical or laboratory evidence to suggest a significant lactic acidosis. Less common causes of lactic acidosis include mitochondrial respiratory poisons such as cyanide, and carbon monoxide; the source of lactate is again anaerobic glycolysis. Biguanides such as phenformin (no longer used as a hypoglycemic agent in the U.S.) and certain polycyclic sugars such as fructose may alter hepatic intermediary metabolism, either impairing catabolism of lactate or favoring its production because of shifts in redox potential (altered NAD+/NADH ratio).[2]

Several causes of anion gap acidosis could also be excluded by the presence of ketones in the urine (and on the patient's breath), e.g., renal failure, lactic acidosis, and salicylate, methanol, or ethylene glycol intoxication. She had no history of diabetes, but on further questioning did admit drinking "some beer" daily with no alcohol for the previous two days. The finding of a normal serum glucose therefore pointed to starvation or AKA.

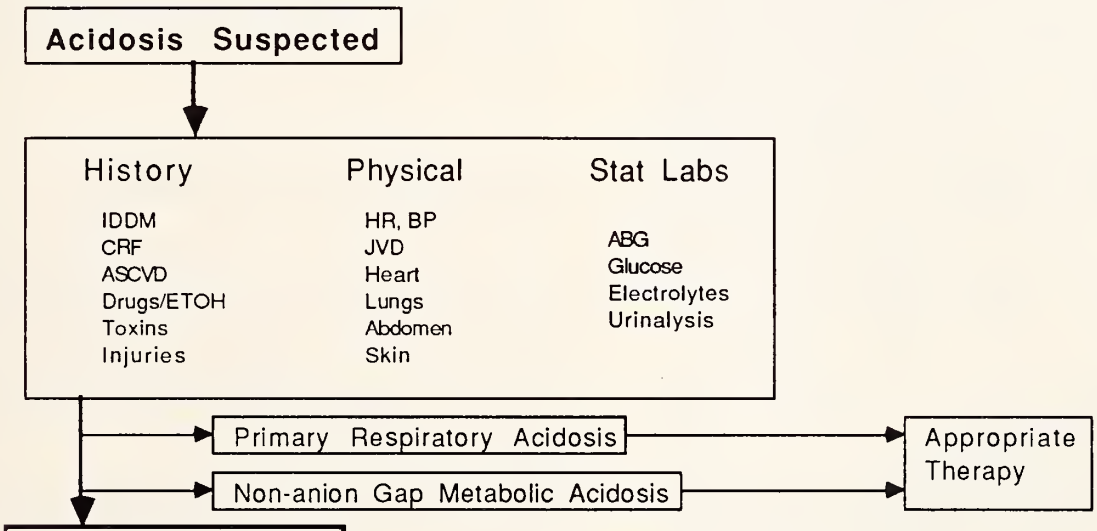
Treatment Strategies

Treatment of the various forms of anion gap acidosis varies according to etiology (see table 2). Diabetic ketoacidosis predictably responds to volume and insulin, rarely (and controversially) requiring bicarbonate. Severe uremic acidosis requires emergent dialysis to prevent hyperkalemia and death. Lactic acidosis from shock requires prompt hemodynamic support including volume, pressors and inotropic agents, frequently bicarbonate, and treatment of the underlying cause (e.g., sepsis, cardiogenic shock). Other causes of severe lactic acidosis such as bowel infarction require intensive bicarbonate and intravenous fluid therapy followed by rapid removal of the underlying cause (necrotic tissue, drugs or toxins) for complete resolution.

Response to Treatment

We chose to treat our patient initially with one liter of 5% dextrose in 0.45% NaCl containing 100mEq of $NaHCO_3$. The bicarbonate was initially added because she had a low serum HCO_3- and elevated WBC count and we did not know whether she had a primary lactic acidosis or AKA. Thiamine was also given because of the presumptive diagnosis of chronic alcohol use. Repeat arterial blood gas two hours following this intervention revealed a pH=7.37, paO2=63.6mmHg, $paCO_2$= 16.5mmHg, and HCO_3=9.5mEq/l. The patient's respiratory rate diminished and she reported feeling better. Because of the limited diagnostic and therapeutic resources at her local facility, the patient was transferred to Duke University Medical Center. Repeat blood gas four hours after initial presentation revealed a pH=7.50, paO_2=105mmHg, $paCO_2$=24mmHg, and HCO_3=19mEq/l. Blood chemistries showed Na=130mmol/l, K=3.3mmol/l, CL=89mmol/l, HCO_3=15mEq/l, BUN=17mg/dl, and Cr=3.4mg/dl with a calculated anion gap of 26. Repeat CBC showed that the hemoglobin had been diluted from 15 gm/dl to 12.1 gm/dl with intravenous fluid therapy, and the WBC had decreased from 33,900 to 18,000/mm^3.

Table 2
Initial Evaluation and Treatment



Suspected Etiology	Initial Treatment	Definitive Test / Rx
Diabetic Ketoacidosis	Insulin, Saline	? Infection, compliance
AKA	**Saline with Glucose**	**RO other causes**
Shock:		
Cardiogenic	Fluids, pressors (? bicarbonate*)	Treat cardiac etiology
Hypovolemic	Fluids (Ringers), blood	Treat underlying cause
Septic	Fluids, pressors	Antibiotics, identify source
Tissue necrosis (e.g. bowel)	Bicarbonate, Ringers	Surgery
Renal Failure	? EKG changes: calcium, bicarbonate insulin + glucose	Dialysis
Drug	Gavage, activated charcoal	Osmolar gap, tox screen
		Possible dialysis, supportive
Salicylates	Consider bicarbonate*	Forced alkaline diuresis
Toxins		Osmolar gap, tox screen
Ethylene Glycol	Consider bicarbonate*	ETOH infusion, dialysis
Methanol	Consider bicarbonate*	ETOH infusion, dialysis
Paraldehyde	Consider bicarbonate*	Supportive (consider fluid restriction)

* Sodium bicarbonate is usually reserved for the more severe cases or when pH is < 7.0

Specialized laboratory tests were performed to confirm the ketoacidosis and attempt to establish, or at least exclude, specific etiologies. Serum ketones were strongly positive at a 1:32 dilution, corresponding to an acetoacetate concentration of about 320mg/dl. An assay for serum volatile substances revealed only acetone, without ethanol, methanol, ethylene glycol or isopropanol. There was no abnormal serum osmolar gap. A screen for common drugs and toxins revealed an absence of salicylates, cocaine, benzodiazepines, opiates, phencyclidine, acetominophen, or tricyclic antidepressants. These measurements established (essentially by exclusion) that our patient most likely suffered from the syndrome of alcoholic ketoacidosis.

The patient was admitted to the general medicine ward and treated with intravenous fluid therapy. Over the next 24 to 36 hours her metabolic derangements corrected. The measured serum creatinine value returned to normal as the serum ketones were cleared. Subsequent history obtained from family members confirmed our assumption that she was a chronic ethanol abuser. She had been drinking heavily for several days during the week prior to admission, but had abruptly stopped drinking about two to three days before presentation because of the onset of abdominal pain, nausea and vomiting, presumably due to alcoholic gastritis. She made an uneventful recovery.

Discussion

Pathophysiology

The syndrome of alcoholic ketoacidosis bears a misnomer. The pathophysiology involves not a direct toxic effect of ethanol but the metabolic consequences of prolonged, heavy ethanol ingestion followed by an abrupt cessation of drinking. The typical history includes one of chronic alcoholism with a recent binge associated with poor carbohydrate intake, followed by one to three days of anorexia, nausea and vomiting due to alcoholic gastritis, esophagitis, pancreatitis or hepatitis, or other supervening acute illness resulting in poor oral intake and cessation of alcohol ingestion.[3] Moderate-to-severe volume contraction appears to be an absolute requirement for development of significant ketoacidosis. Multiple factors may contribute to hypovolemia including poor oral intake while drinking, exposure with increased insensible losses, ethanol inhibition of ADH secretion (diuretic effects), hyperemesis, and diarrhea. Frequently volume contraction is exacerbated by GI blood loss, which is common in alcoholics from a variety of sources (e.g. varices, esophagogastritides, Mallory-Weiss tear, peptic ulcer).

Typically the blood alcohol concentration on presentation is zero. Ethanol chronically inhibits hepatic ketogenesis and gluconeogenesis, and promotes lipolysis.[3-5] When the patient ceases ethanol intake as described, ketogenesis is disinhibited and the large accumulation of serum free fatty acids are actively taken up by the liver and converted to ketones.

Several other pathophysiological mechanisms also contribute to the accumulation of ketoacids. Volume contraction impairs urinary clearance of ketones, and is probably also responsible for the stimulation to increased secretion of "stress" hormones including epinephrine, cortisol, glucagon and growth hormone, which in turn aggravate ketosis both by stimulating lipolysis and ketone production and by inhibiting insulin secretion.[3] Insulin is essential for ketone utilization in peripheral tissues. Therefore very low insulin levels result in a block in ketone uptake.[3-5]

The diagnosis also depends on the exclusion of alternative diagnoses by history, physical exam and laboratory evaluation. Measurement of elevated free fatty acid and cortisol concentrations may help establish the diagnosis, but these tests are not readily available and are probably not necessary.

Physiologic Basis of Treatment

Treatment is aimed at reversing the pathophysiologic mechanisms responsible for the development of alcoholic ketoacidosis. First and foremost, volume depletion must be corrected aggressively in order to reduce the stress response associated with hypovolemia and promote urinary excretion of ketoacids.[3-5] The addition of glucose to the intravenous fluids is useful in that it stimulates insulin secretion, which in turn suppresses hepatic ketogenesis and promotes peripheral tissue utilization of ketones.[6] Although AKA is often characterized by relatively low insulin levels, adjunctive insulin treatment in AKA neither speeds recovery nor improves outcome, and may place the patient at undue risk of hypoglycemia. Bicarbonate may be given, but is probably unnecessary and is potentially harmful if the arterial pH is greater than 7.20. Bicarbonate was initially added to the resuscitation fluid in the present cause because of a low HCO_3 of 2mEq/l and the inability to rapidly rule out significant lactic acidosis due to sepsis (WBC > 33,000/mm^3). This eventually led to a mild alkalosis (pH 7.5) as the syndrome resolved. Other aspects of treatment are directed at the precipitating or concomitant medical complications (infectious, inflammatory, hemorrhagic, etc.), as well as attention to the very real possibility that the patient may have a mixed disorder (e.g. DKA + AKA or AKA + lactic acidosis).

The patient may appear to worsen if treatment is monitored by measuring urine ketones. In alcoholic ketoacidosis, the concentration of b-hydroxybutyrate is five- to sevenfold greater than that of acetoacetate. In contrast, diabetic ketoacidosis is characterized by b-hydroxybutyrate concentrations only two- to threefold those of acetoacetate. The commonly used nitroprusside (Acetest) assay for urinary ketones is insensitive to b-hydroxybutyrate, measuring only acetoacetate. This assay may thereby underestimate the severity of the

ketoacidosis, or miss the diagnosis altogether, especially if there is a relative excess of b-hydroxybutyrate as compared to acetoacetate. As ketones begin to be utilized the b-hydroxybutyrate is converted to acetoacetate; the measured urinary ketones may increase initially with appropriate treatment.[4,5] This actually indicates that the patient is getting better, not worse. Response to treatment is therefore best monitored by arterial blood gases and serum chemistries (especially bicarbonate and the anion gap). If treated aggressively and comprehensively, most patients make a complete and rapid recovery.

Conclusions

Severe acidosis may be life threatening, leading ultimately to cardiac arrest and death. The acutely ill, acidotic patient requires rapid evaluation to establish at least a working diagnosis in order to promptly initiate treatment. A limited number of simple clinical observations and common "stat" laboratory tests enable the practitioner to quickly narrow potential etiologies to the point that effective treatment can be initiated and the patient's response can be monitored. This case illustrates how the prompt evaluation of a seriously ill patient using a brief history, physical examination and a few "stat" labs can result in the early institution of appropriate treatment, avoid unnecessary delays in intervention, and improve the chances of a good outcome. ❑

Acknowledgment

We thank Eugenio Hernandez for his helpful review of the manuscript.

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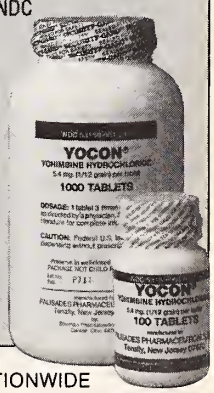
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

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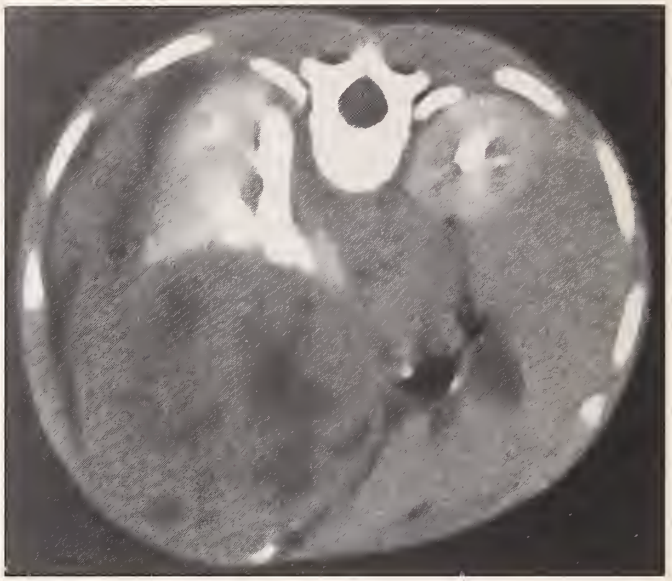
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Wilms' Tumor



CT scan of a young woman with Wilms' Tumor revealing a large heterogeneous mass of the left kidney.

Max Wilms, like so many pioneering physicians who are remembered today in association with but one small facet of their life's work, pursued amazingly diverse medical interests hardly revealed by his modern remembrance for "Wilms' tumor."

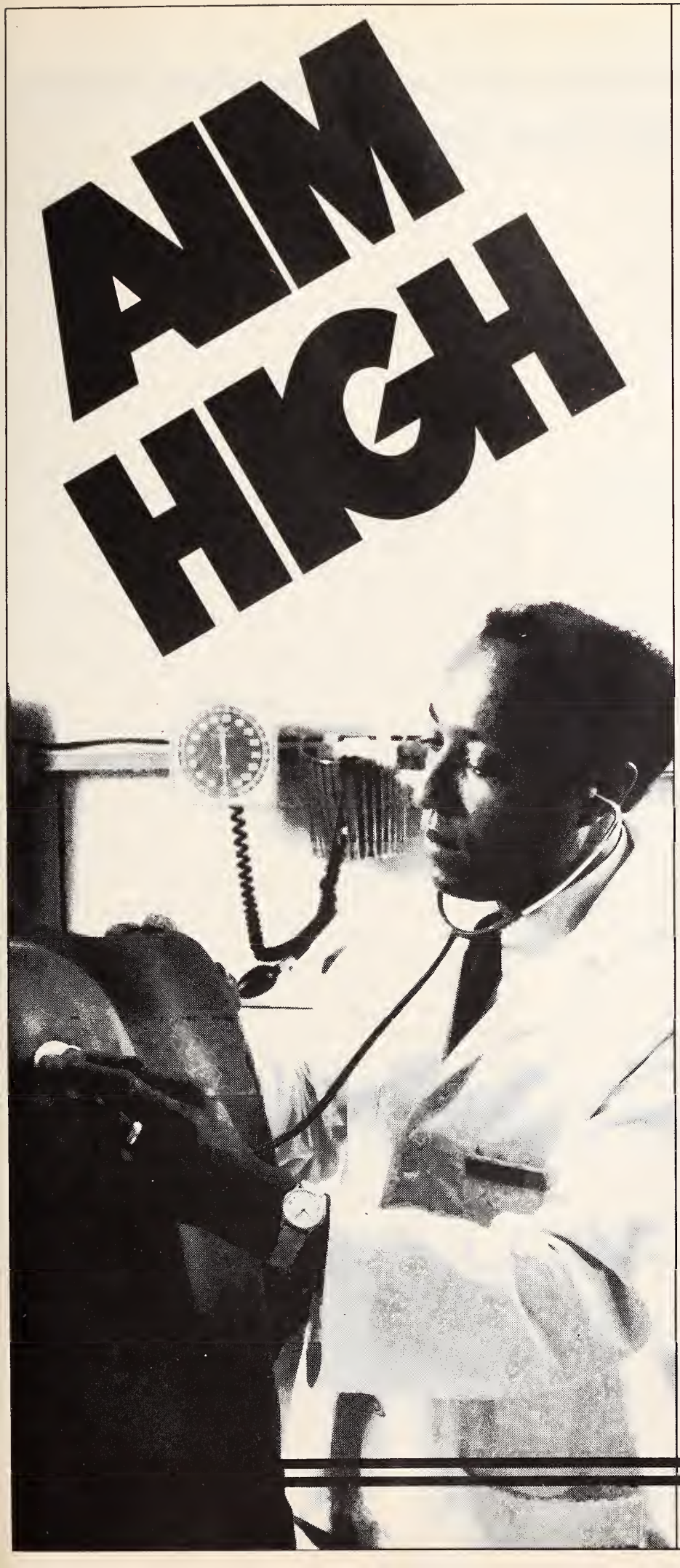
Born the son of a lawyer in 1867 in Aachen, Germany, Max Wilms received his formal education in Munich, Marburg, and Bonn, and was graduated in Berlin in 1890. His medical training mirrored his undergraduate education in both breadth and diversity. He began with an interest in pathology, studying and serving as an assistant at the Institute of Pathology in Giessen. It was here, during the early years of his medical career, that he published his work entitled "Die Mischgeschwuelste" (mixed tumors) concerning tumors of the ovaries, testicle, head and neck, bladder, kidney, and other organs. This monograph contains his description of a patient with the tumor that now bears his name: "a three year old girl with a tumor of the kidney which had grown to immense proportions in a short time." He includes a description of the clinical course of this patient and histologic features of the tumor. Wilms is credited with the first acceptable classification of "mixed tumors" based upon their embryologic origins, in contrast to the former system by which these tumors were classified according to their most dominant histologic features.

Despite these important insights into the pathologic classification of mixed tumors, Max Wilms was most well known in his own time for his work in the field of surgery. Following his pathology training, Wilms studied internal medicine for two years in Cologne, then moved to Leipzig, where he studied surgery as an assistant to the famous Professor Trendelenberg, and was himself promoted to the post of professor of surgery in 1904. Wilms established his reputation early with his work entitled "Der Ileus" (The Ileus). He subsequently published on a wide range of topics including fracture surgery, traumatic heart surgery, and techniques of tendon suturing, to mention but a few. His professional advancement proceeded rapidly; he was named Professor of Surgery at Basel in 1907, then promoted to Chair of Surgery at Heidelberg in 1910. At the peak of his career, he served as editor of a widely read textbook of surgery that was translated into five languages. His life came to an unfortunately premature end, however, in 1918, at the age of 51, when he died of septic diphtheria. Ironically, he contracted this illness after contaminating himself while operating on a French prisoner of war. The Frenchman subsequently recovered.

Some of the more interesting features of Wilms's life work can be found in the innovative approach he took to several technical and scientific problems. He pioneered the perineal prostatectomy, utilizing an off-center surgical approach with which he was reportedly able to perform the entire procedure in four to five minutes! He also invented a device that enabled him to externally tamponade the post-operative prostatic bed through the rectum, and thus limit bleeding complications. His scientific interests served not only as a model for progressive surgeons, but also for those interested in oncology. He pursued interests and developed experimental practices which one could consider forerunners of modern experimental oncology. Wilms studied the dynamics of tumor growth by implanting tissue into the abdominal cavities of experimental animals. He was also perhaps the first individual to investigate the effect of x-rays on the prostate gland.

By today's standards, Max Wilms must certainly be considered a renaissance man of medicine, with clinical interest and expertise in pathology, and medicine, and a successful career in academic surgery, as well as research interest in tumor biology and the effects of x-rays on tissues. His early pathologic investigations, for which he is remembered today, comprise but a small portion of the clinical and scientific range of his medical career.

Stephen C. King, MD, Division of Radiation Oncology, Duke University Medical Center, Durham 27710.



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Breath Mints for the Dragon

Lindane Toxicity

Ronald B. Mack, M.D.

I have heard you say that you hated the story of *Beowulf*;[1] I don't know why, he always spoke well of you. Beowulf, you may recall, is the oldest known English epic and probably dates from the seventh or eighth century. It is a long narrative poem about people who are significant in the development of a nation. It is a folk epic that passed from generation to generation by word of mouth and was ultimately committed to written form, author unknown.

Our hero is of royal blood, with non-steroid induced incredible strength and remarkable courage, who destroys the giant dragons that menace the kingdom of his fellow aristocrats. The lessons to be learned from his story include the profound thought that "we must all expect an end to life in this world; let him who can, find fame before death, because that is a dead man's best memorial." He also reminds us that "among all peoples it is only through those actions which merit praise that a man may prosper." All of us, men and women health care workers, try to slay the dragons of disease, every day and night, and sometimes these dragons are tiny, like Sarcoptes and Pediculi.

One of the major weapons against these little monsters, scabies and lice, has been gamma benzene hexachloride, a.k.a. lindane, GBH, Kwell®. This paper was prompted by a recent phone call, in the dead of night, from a colleague who had a little patient who swallowed some Kwell®. I found the episode ironic because we are now in that part of the 20th century where safer products are now available for the treatment of scabies and lice. Is lindane going to leave the scene, not with a whimper but with a bang? (The ingesting toddler did well, by the way.)

From the Department of Pediatrics, Bowman Gray School of Medicine, Wake Forest University, 300 S. Hawthorne Dr., Winston-Salem 27103.

Gamma benzene hexachloride was initially synthesized by Michael Faraday in 1825 but the pure alpha, beta, gamma and delta isomers were not isolated until 1943 by J.C. Smart.[2] The use of hexachlorocyclohexane as an insecticide was attempted by investigators in 1942 but it was the gamma isomer alone that proved to be an effective insecticide and until recently was considered the pediculocide and scabicide of choice in this country, available as a shampoo, cream or lotion. The most controlled efficacy studies were done over 30 years ago. This drug has been considered quite effective against the aforementioned pests, but at a price, for some at least. Some elegant studies, in 1974,[3] documented the disturbing fact that percutaneous absorption and urinary excretion of lindane occurs in humans. If a tracer dose of lindane is administered intravenously to a person, 25% appears in the urine over a five-day period. Percutaneous absorption became the bête noire of some of the clinicians and patients involved with this drug, and there's the rub, although it is very well absorbed via the gastrointestinal and respiratory tracts as well.

Gamma benzene (lindane) is in a notorious group of insecticides known collectively as chlorinated hydrocarbons.[4] This group of chemicals also includes toxaphene, mirex, and chlordecone, etc. These compounds share many properties with DDT. Chlorinated hydrocarbon insecticides are commonly used in agriculture, structural insect control and malaria prevention programs.[5] Many such products are now banned from commercial use because they have the ability to persist in the environment and accumulate in mammalian biologic systems (that includes us, dude).

Chlorinated Hydrocarbon Insecticides

The chlorinated hydrocarbon insecticides are of low molecular weight and quite fat-soluble.[6] As the body stores of these chemicals decrease in exposed humans, the half-lives of the remaining chemicals markedly increase, probably because of

the complex lipoprotein binding. The different organochlorine compounds have very different metabolic storage and excretion rates. For example, it can take months to years to excrete DDT, mirex, kepone and the beta isomer of benzene hydrochloride. For aldrin, dieldrin, heptachlor and hexachlorbenzene, excretion could require weeks to months. Within hours to only a few days, endrin, chlordane, toxaphene and methoxychlor are excreted or metabolized. Our subject, lindane, is eliminated within one to two weeks. This class of compounds is primarily excreted in the feces.

The main toxic effect of chlorinated hydrocarbon exposure appears to be interference with axonal transmission of nerve impulses by disruption of the normal flow of sodium and potassium ions across the axon membrane as nerve impulses pass.[5,7] Slowing of the repolarization of nerve cell membranes then results in the propagation of multiple action potentials for each stimulus. Unlike the commonly used organophosphate insecticides, the chlorinated hydrocarbons do not result in a depression of cholinesterase enzymes. The interference with transmission of nerve impulses occurs especially in the brain, resulting in behavioral changes, involuntary muscle activity and depression of the respiratory center. Some of these potentially toxic compounds are carcinogenic.[4] For example, lindane has been shown to produce hepatomas in rodents. In addition, some of these insecticides can sensitize the myocardium to the dysrhythmic effects of catecholamines as well as inducing renal or hepatic injury.

Chlorinated hydrocarbons are often classified according to how toxic they are.[5] The *highly toxic* group has an animal oral LD_{50} of < 50 mg/kg and includes aldrin, eldrin and dieldrin. *Low toxicity*, animal oral LD_{50} of > 1 gram/kl, is characteristic of ethylan, hexachlorobenzene and methoxychlor. Our subject for today, lindane, is considered in the *moderately toxic* group with an animal oral LD_{50} of > 50 mg/kg and includes chlordane, heptachlor, mirex and toxaphene. As little as 1 gram of lindane ingested by a child can produce seizures, and a dose of 10 to 30 grams is considered lethal for an adult. Ingestion of less than one teaspoon of 1% lindane in a child, and less than a tablespoon in adults, is unlikely to cause any symptoms. Lindane is partially metabolized in the liver and its primary metabolite, 2,3,4,6-tetrachlorophenol, is then excreted in the urine.[8] Lindane is also rapidly eliminated in the stool, urine and breast milk.

Acute lindane poisoning can occur from indiscriminate therapeutic use or misuse (e.g., frequent dermal application to a child) or suicide attempt.[8] The principal clinical adversities of lindane poisoning involve the gastrointestinal tract and the central nervous system (CNS). Symptoms and signs of toxicity usually develop within one-half to six hours post exposure. The first abnormal clinical features are vomiting and diarrhea followed by excessive stimulation of the central nervous system which includes extreme irritability in response to external stimuli, intermittent muscle spasm, remarkable restlessness, tonic-clonic convulsions, collapse and death. These unhappy consequences occur from an ingestion or a large skin contamination. Speaking of the skin, lindane is absorbed through the skin, as has already been mentioned, and is absorbed even more avidly through abraded or eczematoid skin (such as in the excoriated areas of skin seen in patients with scabies). The bottom line of toxicity after excessive exposure to insecticides such as Kwell® is central s stimulation, resulting in seizures and respiratory depression secondary to the seizures.[9]

At our shop we did not use Kwell® in preschool children but opted for Eurax® (crotamiton) instead; this latter topical agent was probably not as efficient but was, in our opinion, much safer. There are many cases in the literature of awesome CNS complications occurring after improper dermal application of lindane. Examples include a four-month-old who experienced increased muscle tone and posturing 24 hours after undergoing a total body application of 1% lindane;[10] an 18-month-old who suffered seizures after two total body applications of the same product;[11] and a four-year-old who received one total body application and experienced coma and a seizure.[12] There are plenty of other cases, of course, all quite similar.

In this end of the century there is probably no need to use gamma benzene products against the enemies of the hair and skin, lice and scabies. We do not need giant-killers against these small but unwelcome invaders. For pediculosis capititis, the literature claims that a 10-minute application of 1% permethrin cream (Nix®), available over the counter (OTC), is therapeutically superior to a single four-minute application of 1% lindane shampoo.[13] Another safe product (so far) is RID®, a pyrethrin combined with piperonyl butoxide, also OTC. In a recent study,[14] these two products seem to be of equal efficacy. After therapy, combing out the nits with a fine comb is a time-honored and apparently useful adjunct.

Even more exciting, from a toxicological point of view, is the elimination of Kwell® in the treatment of scabies and the substitution of 5% permethrin cream a.k.a. Elimite®. The major ingredient is a pyrethroid, a synthetic pyrethrin, that is active on ticks, fleas, mites and lice as well as scabies. This chemical acts on the nerve cell of the arthropod to disrupt the sodium channel current by which the polarization of the cell membrane is regulated.[15] Delayed repolarization and paralysis of the pests are the results of this biochemical insult. (Goody, so long you cruddy pests, who needs ya!!) Very little of this chemical is absorbed into the human body percutaneously and it is designed for single-application treatment of *Sarcoptes scabiei*. Elimite® is considered safe for anyone over the age of two months. (Good-bye also to Kwell®, you will not be missed.)

Diagnosis and Treatment

Before we bid a final *arrivederci* to Kwell® and the gang we need to figure out what to do when faced with a toxic encounter with this stuff; there is plenty of it available and

probably will be for a while. To begin, diagnosis is based on the history of exposure and clinical exhibition of abnormal signs and symptoms. Lindane can be measured in the serum by gas-liquid chromatographic methods.[9] Levels are useful in documenting toxicity after the acute situation has resolved; the levels, however, are not thought to be useful for clinical management.[16]

In those patients who ingest Kwell® accidentally or on purpose, ipecac-induced emesis is probably not a great idea since seizures can occur quite quickly and without fair warning. Gastric lavage is a consideration in patients seen soon after ingestion, or who are in coma. If seizures are present, control them before lavage, of course. The administration of activated charcoal seems wise.[7,9] This can be followed by one dose of a cathartic, such as sorbitol. Do not, however, administer milk, oils or fatty foods as they enhance absorption. Avoid adrenergic amines, as chlorinated hydrocarbons sensitize the myocardium and could increase myocardial irritability. (Did you forget this? for shame!!) If the exposure was dermal and the patient became symptomatic quite quickly, wash the area, very thoroughly, as your mom would, with soap and water.

The one worry we all have is the prospect of seizures occurring secondary to lindane exposure, regardless of portal of entry into the body. Intravenous diazepam is the drug of choice for this complication. If it fails to stop the seizures, give phenobarbital, cautiously.[9] Dialysis and exchange transfusion probably are futile, but a recent case report documents a successful attempt at lowering the lindane level in a toxic teenager by using hemoperfusion.[17] This latter method is not the method of choice, however, because of the large volume of distribution of this chemical. A newer approach would employ repeated doses of activated charcoal or cholestyramine resin to enhance elimination (not of the patient, you silly!!) of the chlorinated hydrocarbon, by interrupting enterohepatic circulation.[5,8,16]

As you go forth each day, ready to slay the "dragons" who attack your patients and make them ill, remember the words of Beowulf, who tries to teach us how we ought to behave when we are without hope, when everything is transient: "Unless you are already doomed, fortune is apt to favor the person who keeps their nerve."

I dedicate this article to a fallen colleague, Dr. Marc Browning, who seemed to be able to conquer his patients' dragons but not the big ugly one that attacked him. This warm, talented nephrologist left us and his family much too early, but not before leaving the world a better place than when he found it. His family exhibited grace under pressure in a manner that should be an example to all of us lesser mortals. Hail and farewell, my friend, you will be missed. ❑

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- Stevens-Johnson syndrome, toxic epidermal necrolysis, and anaphylaxis have been reported rarely. Anaphylaxis may be more common in patients with a history of penicillin allergy.
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Tort Reform and Access to Obstetrical Care

The Proposed North Carolina Birth Impairment Fund

Lise K. Fondren, M.A., Michael K. Watterson, M.S.P.H., Thomas C. Ricketts, Ph.D., M.P.H.

The current medical professional liability situation in the Unites States most profoundly affects physicians providing obstetrical care. Obstetrician/gynecologists (ob/gyns) experience two to three times more malpractice claims than the average for physicians in all other specialties.[1] In a 1987 survey by the American College of Obstetricians and Gynecologists (ACOG), 70.6% of ob/gyns reported they had at least one claim filed against them at some time during their careers.[2] The number and severity of claims has in turn affected the price and availability of medical malpractice insurance.[1] Between 1984 and 1987, malpractice premiums rose 70% for ob/gyns across the United States. The expense and lower relative availability of medical malpractice insurance for obstetrical providers has had severe consequences on the accessibility of their services, particularly for poor women and those living in rural areas.[1] Every year, there are increasing numbers of ob/gyns who cease to deliver babies. Surveys of the members of ACOG indicated that 9% stopped practicing obstetrics in 1983, 12.3% in 1985 and 12.4% in 1987.[2] This trend is somewhat less pronounced in North Carolina, where 6.8% (n=28) of the ob/gyns responding to a 1989 survey discussed in this report had stopped practicing obstetrics since 1986.

Family physicians, traditionally the primary providers of obstetrical care in rural areas, have also stopped providing obstetrical services in response to the increasing costs of liability insurance. The American Academy of Family Physicians (AAFP) reported that 23.3% of its members had stopped practicing obstetrics by 1985.[1] On the state level, the number of family practitioners providing obstetrical services in North Carolina dropped from an estimated 500 to 150 physicians between 1985 and 1988, causing severe shortages of obstetrical providers, particularly in rural areas.[3] The number of physicians providing obstetrical care in nonmetropolitan areas nationwide has dropped 20% in the last five years.[1]

This report describes the problems of access to obstetrical services in North Carolina, with particular emphasis on the effects of a tort reform package that was introduced to the North Carolina General Assembly in the summer session of 1990. We will look at North Carolina tort reform in light of similar tort reforms already enacted in other states, namely Virginia and Florida, and discuss other policy options to increase access to obstetrical care in North Carolina.

Tort Reforms in Virginia and Florida, and the North Carolina Proposal

As a consequence of the rising costs of medical malpractice liability insurance, the period between 1985 and 1989 has been characterized as a time of "crisis" in obstetrical access because of a perceived and real problem with the cost of medical malpractice liability insurance. Every state, with the exception of West Virginia, has enacted some sort of tort reform in an effort to reduce the number and severity of medical malpractice claims and thereby bring down the high cost of medical malpractice insurance.[1] These efforts have mostly involved limits on physician liability, *ad damnum* provisions, and limits on attorney's fees (*ad damnum* clauses disclose the amount of the award a plaintiff is seeking in a suit).

In 1976, North Carolina passed several reforms to be included in its tort law in an effort to curb the high cost of medical malpractice insurance.[4] These included a reduction of the statute of limitations for filing a malpractice claim and the elimination of the use of *ad damnum* clauses for actions claiming over $10,000 in damages. However, none of the enacted tort reforms in North Carolina directly addressed the issue of skyrocketing obstetrical malpractice liability costs.

From the North Carolina Rural Health Research Program, University of North Carolina Health Services Research Center, Chapel Hill 27514.

The most innovative tort reforms have been enacted in Virginia and Florida. In these states, claims involving birth-related neurological injuries, usually cerebral palsy syndrome, are compensated from an established fund on a no-fault basis (much like worker's compensation), thus taking such cases out of the tort system altogether. These plans vary slightly in how they are implemented, but more importantly in how then define a birth-related neurological impairment, as these definitions determine who would be eligible for compensation.

The Virginia Birth-Related Neurological Injury Compensation Act (Injured Infant Act of 1988) was the first such no-fault compensation law dealing solely with medical liability, and was passed in response to a very real obstetrical care crisis.[5] In 1986, two of the state's medical malpractice liability carriers had declared they would no longer write new policies for obstetrical providers and a third insurer stated that it was ending coverage of all obstetricians practicing in medical groups of ten providers or less. As a result, one out of every four obstetricians in Virginia was at risk of losing malpractice liability insurance coverage upon expiration of 1987 policies. The Medical Society of Virginia responded by drafting a bill that would take certain birth-related injuries out of the tort system, with the anticipated result being smaller and more predictable jury awards and lower malpractice premiums. Since the bill was drafted in consultation with Virginia's malpractice insurance carriers, it was predicted that they would reenter the medical liability insurance market, as indeed they did within days after passage of the bill.

The Injured Infant Act of Virginia establishes a fund from which cases fitting the Act's definition of a birth-related neurological injury are compensated. Damages are not permitted to be sought through the tort system. Participation by obstetrical providers and hospitals in the program is not mandatory. The fund is maintained by a yearly assessment of $5,000 for participating physicians and a $50 fee for each delivery from participating hospitals. The fund is further enhanced by a $250 annual assessment from every licensed physician in the state. Those who participate are also required to provide obstetrical care for the indigent through local health departments.

The Virginia statute defines "birth-related neurological injury" as "... an injury to the brain or spinal cord of an infant caused by the deprivation of oxygen or mechanical injury occurring in the course of labor, delivery or resuscitation in the immediate post-delivery period in a hospital which renders the infant permanently nonambulatory, aphasic, incontinent, and in need of assistance in all phases of daily living. This definition applies to live births only." The Virginia General Assembly, in its 1990 session, amended this definition to state that the injury must cause the infant to be permanently "motorically disabled and (i) developmentally disabled or (ii), for infants sufficiently developed to be cognitively evaluated, cognitively disabled." The 1990 amendment was intended to clarify rather than broaden the definition of types of infants protected by the fund.[6]

As Virginia's was the first no-fault scheme of its kind to be enacted, it has received the most scrutiny. Brown notes that the definition of neurological injury in the Virginia Act may be too restrictive.[7] When the Act went into effect in 1988, the rate of new claims for damages in the tort system dropped by two-thirds. This may have been due to removal of some patients from eligibility for claims within the tort system due to the legislation. Also, potential claimants seeking damages from either the tort system or the fund may be waiting to take action, within the statute of limitations, for the constitutionality of the Act to be decided or the definition of eligibility for compensation in the Act to be broadened.

The Florida Birth-Related Neurological Injury Compensation Plan that went into effect on January 1, 1989 was drawn up along much the same lines as the Virginia Act and came about under much the same circumstances.[8] The Florida Act states that in order to be eligible for compensation the infant must be "permanently and substantially mentally and physically impaired." Unlike the Virginia Act, the Florida statute does not list specific disabilities.[7]

Freeman and Freeman, who first proposed that a no-fault compensation scheme be applied to cases of cerebral palsy, argue that those plans already in effect are not truly "no-fault," as they cover only those cases where the infant is most seriously handicapped and require that the neurological injury be the consequence of intrapartum damage.[9] Their proposal would cover infants having a "nonprogressive motor handicap resulting from damage to the central nervous system at the time of or before birth that substantially interferes with a child's use of one or more of his or her arms or legs." In their proposal, no punitive damages would be awarded, and compensation would cover 80% of all handicap-related expenses up to $250,000 per child.

In 1989, the North Carolina General Assembly created the North Carolina Birth-Related Neurological Impairment Study Commission. The Commission's efforts came to fruition on June 4, 1990 when House Bill 2296 establishing the North Carolina Birth-Related Neurological Impairment Program (Birth Impairment Fund) was introduced in the North Carolina General Assembly. This bill proposed no-fault compensation for those born with a birth-related neurological injury. The Program would be placed under the Department of Environment, Health, and Natural Resources, the Secretary of which would appoint a director who would determine the eligibility of claims. The fund would be maintained by a $170 fee per delivery, of which 55% would be paid by the delivering physician and 45% would be remitted by the hospital or birthing facility where the delivery was performed.

The North Carolina proposal in HB 2296 defines a "birth-related neurological impairment" as "an impairment of the brain function of a person which occurred or could have occurred during pregnancy, before or during a delivery or in the immediate resuscitative period after a delivery, and which results in a nonprogressive inability to control motor function and renders the person chronically impaired. A birth-related

neurological impairment may be accompanied by one or more associated symptoms, including: (i) vision, speech, hearing or learning difficulties, (ii) seizures, or (iii) behavioral and psychological problems. This definition shall not include disability caused by genetic abnormality." The North Carolina definition of a "birth-related neurological injury" was, by purpose, broadly drawn.

The N.C. Birth Impairment Fund bill was considered by the N.C. House Human Resources Subcommittee on Mental Health, Exceptional and Gifted People, where an amendment was added to the bill mandating that obstetrical providers accept Medicaid patients as well as cooperate with local health departments in the development of plans to provide "continuity and quality of care" to those patients eligible for Medicaid. From there, the bill was moved to the full House Committee on Human Resources, where despite much opposition it was given a favorable report and referred to the full House for passage. Once on the House floor, the bill was removed from the calendar and sent to the House Finance Subcommittee on Ways and Means, effectively killing the proposal for the 1990 legislative summer session.

NC Obstetrics Access and Professional Liability Survey

In 1988, the North Carolina Rural Health Research Program (NCRHRP) proposed to study the malpractice and obstetrical access issue in this State and received grant support for this effort from the Office of Rural Health Policy, Health Resources and Services Administration, U.S. Department of Health and Human Services. With endorsement from the N.C. Obstetrics and Gynecology Society, all ob/gyns licensed to practice in North Carolina were surveyed by mail (624 MDs) during 1989. A 65% response rate was achieved with 355 (87.2%) of the respondents stating that they were still practicing obstetrics. The respondents reported delivering approximately 57,228 infants in 1988, compared to 97,560 total births in North Carolina for that year.[10] A higher response rate among nonmetropolitan obstetrical providers (78% compared to 60% for metropolitan) was achieved due to a more intensive follow-up directed to this group.

Those surveyed were asked questions concerning their obstetrics practice status, patient load, Medicaid patient load, and whether or not they had delivered a child who had, or later developed, cerebral palsy. The medical malpractice liability crisis has been seen as partly responsible for limiting access of those on Medicaid to obstetrical providers and causing physicians to curtail their number of high-risk deliveries.[1] Because the proposed North Carolina Birth Impairment Fund is an attempt to alleviate the malpractice crisis, the survey was designed to measure the impact of such reform upon the practices of ob/gyns. The survey included questions that covered access to obstetrical care for Medicaid, uninsured, and high-risk patients. The survey also investigated the effect of alternative policies such as an increase in the Medicaid reimbursement level. Those who were no longer practicing obstetrics were asked why they discontinued that part of their practice to determine if medical malpractice liability concerns had influenced their decision.

Results: Tort Reform and Practice Change

Respondents were asked the following: "A proposal is being prepared for consideration by the North Carolina General Assembly that will remove most cases of cerebral palsy from the tort system through the development of a fund to provide care for cerebral palsy patients. Do you think a system such as this would change your obstetrics practice?" Of those responding to this question (n=319), 70% (224) responded that it would not change their practices, while 30% (95) thought that it would do so (table 1).

The data suggest that the proposal would have greater influence among nonmetropolitan providers than among metropolitan providers; 36% of the nonmetropolitan compared to 26% of the metropolitan respondents thought their practices might change. Those who stated that tort reform would lead to changes in their practices were asked how they felt it would do so in relation to certain aspects of their practice (tables 2-5; next page).

A majority of the physicians responding felt that the tort reform proposal would generate an increase in their number of high-risk deliveries (59.3%). Most respondents also felt that the number of normal deliveries, Medicaid deliveries and uninsured deliveries would not be affected by passage of the proposal. There was not a substantial difference between metropolitan and nonmetropolitan respondents, except for the effect that passage of tort reform would have on Medicaid patient load. Fifty-six percent (56.4%) of the nonmetropolitan respondents felt that their Medicaid patient load would increase but only 28% of the metropolitan respondents foresaw an increase in the number of Medicaid patients they would see.

Table 1
Passage of Tort Reform: Changes in Obstetrics Practice

Would passage of tort reform change your practice?

	Metro ob/gyns		Nonmetro ob/gyns		Total ob/gyns	
	Number	Percent	Number	Percent	Number	Percent
Yes	52	26.1	43	35.8	95	29.8
No	147	73.9	77	64.2	224	70.2
Total	199	100%	127	100%	319	100%

Table 2
Passage of Tort Reform: Effect on Number of Deliveries

How would passage affect your number of deliveries?

	Metro ob/gyns		Nonmetro ob/gyns		Total ob/gyns	
	Number	Percent	Number	Percent	Number	Percent
Number would decrease	2	4.1	1	2.5	3	3.4
Number would remain same	26	53.1	20	51.3	46	52.3
Number would increase	21	42.9	18	46.2	39	44.3
Total	49	100%	39	100%	88	100%

Table 3
Passage of Tort Reform: Effect on Number of High Risk Deliveries

Passage's affect on number of high-risk deliveries?

	Metro ob/gyns		Nonmetro ob/gyns		Total ob/gyns	
	Number	Percent	Number	Percent	Number	Percent
Number would decrease	3	5.9	1	2.5	4	4.4
Number would remain same	19	37.3	14	35.0	33	36.3
Number would increase	29	56.9	25	62.5	54	59.3
Total	51	100%	40	100%	91	100%

Table 4
Passage of Tort Reform: Effect on Uninsured Patient Load

How would passage affect your uninsured patient load?

	Metro ob/gyns		Nonmetro ob/gyns		Total ob/gyns	
	Number	Percent	Number	Percent	Number	Percent
Number would decrease	1	2.0	0	0	1	1.2
Number would remain same	31	63.3	23	60.5	54	62.1
Number would increase	17	34.7	15	39.5	32	36.8
Total	49	100%	38	100%	87	100%

Table 5
Passage of Tort Reform: Effect on Medicaid Patient Load

How would passage affect your Medicaid patient load?

	Metro ob/gyns		Nonmetro ob/gyns		Total ob/gyns	
	Number	Percent	Number	Percent	Number	Percent
Number would decrease	1	2.0	1	2.6	2	2.3
Number would remain same	34	69.4	16	41.0	50	56.8
Number would increase	14	28.6	22	56.4	36	40.9
Total	49	100%	39	100%	88	100%

Deliveries per Month and Practice Change

Physicians were asked how many babies they delivered per month, on average. Overall, 55.9% (N=181) of all respondents delivered between 11 and 20 infants per month while 26.5% of those surveyed delivered between 6 and 10 infants per month. Twelve percent (12.4%) delivered more than 20 babies per month. Cross-tabulations were done on the number of deliveries by anticipated effects of tort reform on medical practice. The passage of tort reform was seen as affecting a greater percentage of nonmetropolitan physicians who deliver between 6 and 20 babies per month than their metropolitan counterparts delivering the same number of babies. Of the nonmetropolitan providers who are delivering 6 to 10 and 11 to 20 infants per month, 39.3% and 36.8%, respectively, believed their practices would change under the proposed tort reform, as opposed to 24.1% and 23.8% of the metropolitan providers delivering the same numbers of babies.

Medicaid Patient Load

Physicians were asked to indicate their policies regarding the provision of prenatal and delivery care to Medicaid patients. Table 6 shows the breakdown between nonmetropolitan and metropolitan respondents. Over three quarters (78%) of the nonmetropolitan physicians provide care to Medicaid patients while a little over half (53%) of the metropolitan physicians provide care for these patients.

Cross-tabulations were done between those who stated their practices would change under tort reform (table 1) and their responses to the volume of Medicaid patients they served (table 6; next page). Thirty-two of the 98 ob/gyns (33%) who provided care to a limited number of Medicaid patients would also see their practices change under tort reform. Fifteen of the 34 nonmetropolitan physicians (44%) who provided care to a limited number of Medicaid patients would also see their practices change under a no-fault insurance scheme, while 17 of 64 metropolitan providers (26.6%) who provided care to a limited number of Medicaid patients would see their practices change in some way under a tort reform proposal.

Ob/gyns were also asked if they would increase their Medicaid patient load for prenatal and delivery care if the reimbursement level were raised to $1,200 per Medicaid birth. Of the 303 obstetricians who responded to this question, 177 (58.4%) stated they would increase their Medicaid caseload should the reimbursement level be raised, while 126 (41.6%) indicated they would not do so (table 7).

A metropolitan/nonmetropolitan comparison shows that two-thirds of ob/gyns practicing in nonmetropolitan counties would increase their Medicaid patient load if the reimbursement level were raised, while only 53.3% of the metropolitan providers would make a change in Medicaid caseloads.

Table 6
Provision of Obstetrical Care to Medicaid Patients

Provision of prenatal and delivery care to Medicaid patients.	Metro ob/gyns Number	Percent	Nonmetro ob/gyns Number	Percent	Total ob/gyns Number	Percent
do not provide	96	47.3	27	22.1	123	37.9
provide to a limited number	64	31.5	34	27.9	98	30.1
provide to an unlimited no.	43	21.2	61	50.0	104	32.0
Total	203	100%	122	100%	325	100%

Table 7
Increase in Reimbursement Level and Medicaid Patient Load

Would you increase your Medicaid caseload if reimburse ment for deliveries were raised to $1,200?

	Metro ob/gyns Number	Percent	Nonmetro ob/gyns Number	Percent	Total ob/gyns Number	Percent
Yes	98	53.3	79	66.4	177	58.4
No	86	46.7	40	33.6	126	41.6
Total	184	100%	119	100%	303	100%

Cerebral Palsy Deliveries

An effort was made to estimate the number of cerebral palsy deliveries in the last three years in the state. Forty-five percent (45.6%) of the respondents reported delivering a cerebral palsy infant at some time during their practices and 66 of these physicians reported delivering a total of 141 cerebral palsy infants in the last three years (table 8).

Of these 66 physicians, 44 (66.6%) indicated they had delivered one child with such a condition in the last three years and 13 providers stated they had delivered two infants who were subsequently diagnosed with cerebral palsy. Four ob/gyns had delivered three infants with cerebral palsy, and three providers reported having delivered four, five and ten infants with cerebral palsy, respectively. Two ob/gyns stated they had delivered 20 infants in the last three years who had the condition or later developed it. Applying this rate to all ob/gyns known to deliver babies in North Carolina would produce an estimate of approximately 80 cerebral palsy syndrome births per year in North Carolina. The North Carolina Medical Society estimates there are from 100 to 200 infants born with cerebral palsy each year based on an incidence of one to two cerebral palsy births per 1,000 annually, and an average of about 100,000 births per year in this state.[11] This compares to an annual estimate by United Cerebral Palsy of North Carolina, Inc., of 150 infants born each year with cerebral palsy in this state.[12] The estimate derived from the NCRHRP survey may be low for a number of reasons. First of all, there was a lower response rate among ob/gyns in the largest metropolitan counties where high-risk births are more likely to occur because of the location of tertiary care centers; secondly, this figure does not include births attended by other obstetrical providers such as family practitioners or nurse midwives.

Table 8
Cerebral Palsy Deliveries in North Carolina

Have you delivered a child with cerebral palsy?

	Metro ob/gyns Number	Percent	Nonmetro ob/gyns Number	Percent	Total ob/gyns Number	Percent
Yes	82	41.8	62	51.7	144	45.6
No	114	58.2	58	48.3	172	54.4
Total	196	100%	120	100%	316	100%

Of the survey respondents who had delivered a child with cerebral palsy sometime in their careers (N=144), almost 70% (100 MDs) felt a tort reform proposal would not change their numbers of deliveries or their caseload regarding uninsured or Medicaid patients. A metropolitan/nonmetropolitan comparison, however, shows that 40.3% of the nonmetropolitan physicians versus only 22% of the metropolitan physicians indicated that passage of a no-fault insurance fund would affect their practice in some way.

Only thirteen providers who had delivered a child within the last three years indicated that delivery of a child with cerebral palsy had later resulted in a malpractice claim. Four of these claims were settled out of court, two favored the obstetrician, five claims are pending and two are still being considered. Six of the seven nonmetropolitan obstetricians who had experienced a claim said tort reform would change their practices in some way, but only two of the six metropolitan ob/gyns indicated that tort reform would influence their practices. The effects of tort reform appear ambiguous even among those few physicians who have had claims brought against them for a cerebral palsy delivery.

Analysis of Respondents No Longer Practicing Obstetrics

In an effort to find out if malpractice premiums or liability issues influence physicians' decisions to stop practicing obstetrics, cross-tabulations were run on the 47 respondents who were no longer delivering babies as of June 1989. Physicians were asked to rank the three most important factors influencing their decision to stop delivering babies, and 43 of the 47 who no longer deliver provided this information.

Fear of an obstetrics malpractice lawsuit did not seem to be the most important factor; only five (12%) mentioned it as the most important factor, compared to 10 respondents (23%) who indicated the inconvenience of obstetrical practice (long hours, on-call, etc.) as the most influential factor in their decision to stop delivering babies. The increasing cost of malpractice insurance was cited by seven (16%) of the respondents, and only three (7%) reported that an ongoing or prior obstetrics lawsuit was the most important factor in their decision to stop providing obstetrical services.

Discussion

North Carolina has enacted limited tort reform in order to stem the medical malpractice crisis. Tort reforms active in other states, such as limitations on awards, capping attorney's fees, and pretrial screening panels, may also be viable for North Carolina; however, the effectiveness of such legislation in encouraging obstetrical providers as a whole to maintain their practices is still being debated.

Upon review of the research, the National Academy of Science's Institute of Medicine concluded that while certain tort reforms in some states may have had some success, particularly in limiting the size of malpractice awards, they have not succeeded as a whole in restraining the negative impact that the tort system has had on the provision of obstetrical care.[1] In a regional study, however, Rosenblatt et al. concluded that tort reforms in Washington, Alaska, Montana, and Idaho may have decreased the rate at which providers left obstetrical practice.[13]

As tort reforms are being considered, other steps beyond those of adjusting the legal environment may be useful in encouraging ob/gyns and other obstetrical providers to increase access to their services. For example, an increase in the reimbursement rate for Medicaid deliveries was seen in this study as causing ob/gyns to provide care for those patients covered by Medicaid. Though not fully evaluated as yet, the Rural Obstetrical Care Incentive (ROCI) program may also increase access to the delivery of obstetrical care, since the program reimburses selected rural physicians for their malpractice premiums.[14]

The North Carolina Birth-Related Neurological Impairment Program, as it is currently drawn, may or may not influence practitioners to change their practices, depending upon the final structure of the bill. For example, the assessment the provider is charged per birth may be cost-prohibitive and affect provision of care to indigent mothers and/or those on Medicaid by making those patients unprofitable to the provider. How liability insurers will respond to such legislation, via malpractice premiums, is also uncertain. If there is little or no decrease in malpractice premium rates, the assessment required for the Birth Impairment Fund would remain particularly unpopular and would further hinder the willingness of providers to care for the uninsured or those on Medicaid. Mandatory Medicaid participation as amended to the Birth Impairment Fund bill may make this aspect of tort reform unpopular as well.

A careful review of the impact of similar legislation in Virginia and Florida needs to be undertaken to better predict the influence of a no-fault medical liability insurance plan in North Carolina. Two areas that must be carefully investigated are the definitions of eligibility for the Fund, and the response of liability insurers to the legislation. The issue of eligibility was of major importance in the General Assemblies of Florida and Virginia.[5,8] Too broad a definition regarding eligibility for compensation may result in depletion of the funds, while too narrow a definition would make the programs ineffective. The North Carolina definition of "birth-related neurological impairment" is, in keeping with its purpose, more inclusive than both the Florida and Virginia definitions. It has been estimated that 100 to 200 infants per year may be entitled to compensation under the proposed fund.[11] This extremely wide range of potential claimants to the proposed North Carolina fund may be problematic. Indeed, in the debates concerning the North Carolina plan, actuarial soundness of the proposed North Carolina Birth Impairment Fund has been the area of most concern.[15] ❑

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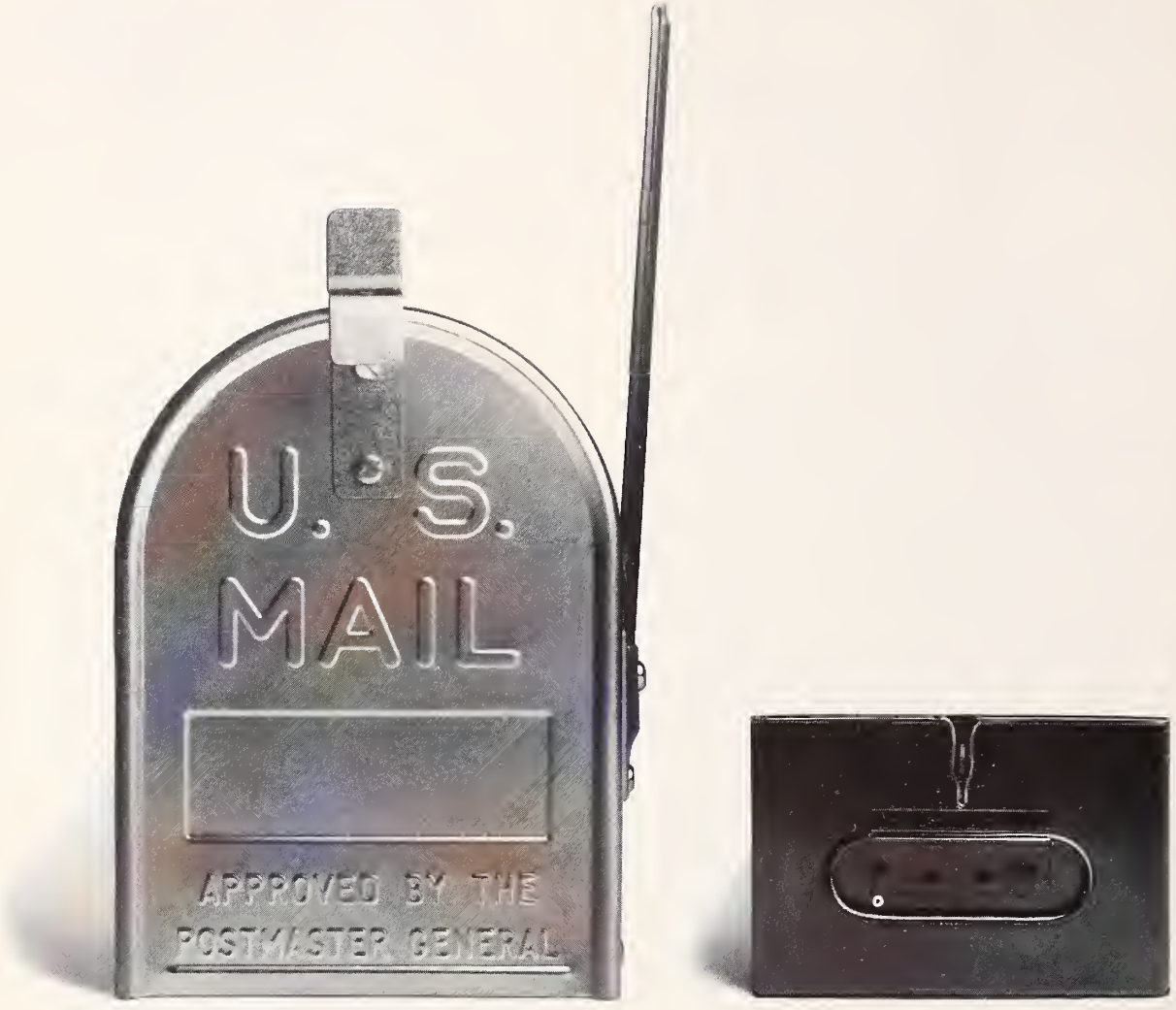
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The Financial Impact of the High Technology Newborn

Dean S. Edell, MD., M.P.H., Debra L. Banton, R.N. Clinician, M.N., and Iley B. Browning, M.D.

The purpose of this paper is to educate the health care worker and the physician regarding the new generation of high technology newborns. This review is neither condoning nor condemning our present health care system.

Each year, approximately 50,000 high-risk infants are born in the United States. With the advances in medical technology such as fetal monitoring, surfactant replacement and the regionalization of perinatal services, an increased number of high-risk infants survive. Since 1900, the infant mortality rates have decreased by approximately 50% every 20 years.[1,2] The greatest decrease in mortality has occurred in the 750 to 1,000 gram birth weight group.[3]

But, with this success in reducing neonatal mortality, morbidity increased. This raises moral and ethical questions about who should live and who should pay for this high-priced health care.

Each year, approximately $1.5 billion is spent in the United States treating high-risk infants. Low birth weight infants are hospitalized for an average of 70 to 90 days. The costs for this specialized health care are reported to range from $16,000 to $250,000 per infant.[2,4,5] Currently, approximately 40% of the health care costs for high-risk infants are paid by the government, 30% by private insurance, and approximately 30% by the recipient of the care.[4]

Morbidity rates remain high in the high-risk infants who survive the neonatal period. The medical costs for rehospitalization, outpatient therapy, etc., for these infants after discharge from a neonatal intensive care unit are astronomical. Many factors have influenced the spending of this large sum of money on these high-risk infants, such as moral and ethical decision making, advances in medical technology and the legal community.

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The average medical care costs of raising a child from birth to three years of age range from $22 a month to $26.80 a month for the northeastern/north central United States and the urban western United States, respectively.

The estimated average medical care costs of raising a neonatal intensive care unit graduate until the age of three are as follows:

With no disability	$ 62.60/month
With mild developmental disability	$ 414.20/month
With moderate/severe developmental disability	$ 650.90/month
With developmental disability and institutionalized	$ 1,216.00/month[5]

Shankarna et al. tracked the medical care costs of 60 children prospectively from discharge from the neonatal intensive care unit until the three years of age.[5] Thirty-five of these infants had developmental and/or neurological deficits detected immediately following their discharge from the neonatal intensive care unit. Twenty-five of these infants had no detected deficits. The total health care cost after discharge from the neonatal intensive care unit for the children in this study was $336,654. Health care insurance providers reimbursed $321,318. The health care costs for 16 children were paid by Medicaid; 15 had Blue Cross/Blue Shield Coverage; three had coverage by other commercial insurance companies and four children were recipients of Crippled Children's Services. Of the total post discharge costs, $14,660 was absorbed by the hospital as bad debt.[5]

The medical care services that contributed to the $336,654 were primary health care, hospital emergency room visits, radiological studies such as CT evaluation, blood tests, specialty clinic visits such as neurology, orthopedics, cardiology, audiology, speech and language, psychology, occupational and physical therapy, and the cost of specialized equipment. The cost of occupational and physical therapy was the most expensive service among outpatient cost.[5]

Lichtig et al. found the costs of hospitalization and the duration of hospital stay, according to birth weight of sick infants, to be as follows:

Birth Weight	Duration of Stay	Operating Cost
<750 gms.	40.5 days	$ 32,000
750-999 gms.	54.5 days	$ 36,100
1,000-1,499 gms.	41.8 days	$ 24,200
1,500-1,999 gms.	23.0 days	$ 12,400
2,000-2,499 gms.	15.0 days	$ 9,700
>2,499 gms.	9.8 days	$ 6,5006

When adjusted for birth weight, the neonatal mortality rate in the United States is among the lowest in the world, but at the greatest cost. The greatest impact on the country's neonatal mortality rate is the high incidence of low birth weight. We appear to have a disproportionatey high incidence of very low birth weight infants (<1,500 grams). The social, demographic, ethnic and educational diversity of the United States can explain most of this, but also contributing to this high neonatal mortality rate is the definition of a live birth. In the United States, any infant, regardless of gestational age, who receives an Apgar score of ≥1, is considered a live birth, whereas some countries define a live birth according to different gestational age or weight criteria. Decreasing the incidence of low birth weight is paramount in reducing mortality.

In the United States we have tended to spend our money on high technology—and we do a good job of saving babies who are low birth weight. But we do a very poor job of preventing this problem. Theoretically, prenatal care could save thousands of dollars each year by focusing on preventive medicine programs. Unfortunately, many of the individuals who need prenatal care the most are not motivated to receive it. Poor prenatal care is not the result of inadequate medical technology, facilities, or personnel; it is a result of social and educational problems.

Approximately one-third of the pregnant women in this country do not receive the prenatal care they need to ensure a healthy baby. These women are twice as likely to deliver premature or low birth weight infants. Infants born to women who did not receive prenatal care require an average stay of eight to 18 days in a neonatal intensive care nursery at a cost of as much as $1,000 a day. Hospital costs for low birth weight survivors of women who received no prenatal care average 50% more than the cost for low birth weight infants of woman who received prenatal care.[7]

It is estimated that approximately $3.40 could be saved for every dollar spent on prenatal care.[8] It is estimated that for every case of low birth-weight averted by prenatal care, the United States health system saves between $14,000 and $30,000 in newborn hospitalization and long-term health care.[8]

Medical advances have made possible the survival of infants with severe, irreversible disabilities. These infants have physical and mental handicaps requiring costly long term health care. Currently, approximately 15% of children in the United States have chronic illnesses, and these are exhausting available health care dollars.

Data from the National Medical Care Utilization and Expenditure Survey indicate that public and private third parties pay 85% of charges for services provided to children with chronic illness. Disabled children with public insurance are best protected, paying out-of-pocket for only about 3% of their health care, whereas children with private insurance paid out-of-pocket for 21%.[9]

Another method of decreasing the large amount of money spent on these neonatal intensive care unit graduates is home care. Thilo et al. assessed the cost of home oxygen therapy for infants who were discharged from the neonatal intensive care unit while still receiving supplemental oxygen.[10] Savings ranged from $4,400 to $160,000, with a mean of $33,370 ± $6,300 per infant. The health insurance carriers used by these families covered 80% to 100% of the cost of home oxygen therapy.

There were other benefits that resulted from early discharge of these infants. If the neonate had remained in the hospital, the child might have been exposed to pathogens that could have resulted in a nosocomial infection, thus prolonging the hospital stay. The child also benefits from the stimulation of the home environment.

In summary, society is faced with a situation in which advanced technology has produced the high-tech, high-priced neonate. This highly sophisticated technology may blur the line between "benefit" and "harm." Can we realistically maintain these high expectations and expenditures? The burden of the neonatal intensive care graduate is draining the health care system and will eventually break it, if changes are not instituted immediately. Prevention of low birth weight infants and the resulting high cost mortality and morbidity must become the directive of all concerned. We must analyze the costs versus the benefits, which will be very difficult in this extremely emotional area—the lives of high-risk neonates. ❑

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Infant Mortality in Durham County in 1989

Bailey Webb, Ph.D., M.D., M. Catharine Moffitt, M.D.

Durham is the "City of Medicine." Here, physicians and public health officials have followed the advice of leaders in medicine and have set up systems that should have put Durham County in the forefront in preventing infant mortality. Public education, access to prenatal services, good transportation and excellent facilities for delivery of babies were in place. We were shocked to see in print that Durham County had a higher infant mortality rate than the average in the nation. We set out to determine what factors precipitated this outcome.

When the state of North Carolina released statistics on infant mortality in 1988 many postulates were put forth to explain why our state's infant mortality rate exceeded the national average.[1] Unavailable prenatal or perinatal care, a large number of adolescent mothers, high rates of Sudden Infant Death Syndrome, infections, trauma, and neglect were all considered potential contributors. Dollfus, et al., cited causes of death by birth weight classifications in a five-year analysis of infant mortality in the state of North Carolina from 1980 through 1984.[2] Our study was undertaken to examine the causes of infant mortality in a county with access and transportation to free prenatal care and a tertiary medical center.

Methods

We reviewed copies of all the birth certificates and death certificates of infants dying before one year of age among Durham County residents.[3,4] The hospital records of all affected infants were obtained from Durham County General Hospital and from the Duke University Medical Center. We also reviewed the records of all mothers of affected infants who had registered for prenatal care at Lincoln Community Health Center. Information sought from the infants' records included: sex, place of birth, date of birth, birth weight, race, gestational age, and cause of death. Information sought from the maternal records included: home address of the mother, mother's race, marital status, parity, age, site of prenatal care (if any), history of sexually transmitted diseases, smoking, alcohol use, and other substance abuse.

Results

The overall infant mortality for Durham County residents in 1989 was 13.2/1,000 live births. This was greater than the 12.7/1,000 live births in North Carolina for 1988,[1] and it was greater than the national average of 9.9/1,000 live births for 1988.[1]

There were 41 infant deaths, which included three sets of twins. Twenty-six infant deaths (63.4%) involved premature infants with gestational age less than or equal to 25 weeks. Thirty-one (75.6%) of the infants had a birth weight of 1,000 grams or less. Congenital anomalies incompatible with life accounted for six deaths (14.6%). One infant with multiple congenital anomalies died following Group B Streptococcal sepsis, and one child died of complications from AIDS. One child suffered an accidental death after a foreign body aspiration. One child died of myocarditis. Twenty-nine (70.7%) of the infants died within the first 24 hours.

Seventeen of the mothers (41.4%) were between 20 and 25 years old, and 26 mothers were multigravidas. The parity of 34 mothers was known. Nine of the mothers (22%) were age 19 years or less. Twenty-seven of the mothers (65.9%) were unmarried or separated. All but three of the 38 mothers were known to have had at least one prenatal care visit.

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According to obstetrical data from Duke University Medical Center (where 82% of the affected infants were born), only 28% of the women delivering at Duke in 1989 (793 out of 2,756) were ages 20 to 24. 582 (21% of total) were age 19 or less.

Conclusions

In Durham County in 1989, most infant deaths occurred in premature infants. It is notable that 13 of the 41 infants (31.7%) had birth weights of 500 grams or less. The inclusion

Table 1
Causes of Death

Congenital Anomalies		6
Renal agenesis/prematurity	1	
CNS Defects	2	
Cardiac anomalies	2	
Multiple malformations and maternal Gp B Strep	1	
	6	
Myocarditis/Pneumonitis/Meningitis		1
Acquired Immune Deficiency Syndrome		1
Accident (aspiration of coin)		1
Prematurity not otherwise accounted for (EGA 34 weeks)		28
Prematurity with maternal Group B Strep infection (EGA 34 weeks)		4
Total infant deaths		41

Table 2
Ages of Mothers

14 years	1
16 years	3
18-19 years	5
20-25 years	17
26-30 years	5
31-36 years	7
Total	38

Table 3
Marital Status

Married	11
Separated	1
Single	26
Total	38

Table 4
Infant Birth Weights

Less than 500 grams	13
500 grams	1
501-750 grams	8
751-1,000 grams	9
1,001-1,500 grams	2
1,501-2,500 grams	3
2,500 grams	4
Death from infection	1
[Accidental death]	1
Total	41

Table 5
Gestational Ages (weeks)

21 weeks	2
22 weeks	8
23 weeks	5
24 weeks	7
25 weeks	4
26-31 weeks	7
34-40 weeks	4
41-42 weeks	1
[Accidental]	1
[unknown]	1
Total	41

Table 6
Places of Birth and Death

	Born	Died
Duke Medical Center	30	33
Durham County General	5	4
Rex Hospital	1	0
Moses Cone Hospital	1	1
N.C. Memorial	2	3
Home	2	0
Total	41	41

Table 7
Source of Prenatal Care

Duke Staff and Private Clinics	21
Health Dept. Prenatal Clinic at Lincoln Community Health Center	7
Private physicians/out of county	6
None	1
Unknown	5

[Some women were seen at more than one site for prenatal care. Seventeen of the mothers of affected infants had been seen at Lincoln Community Health Center at one time or another and might be expected to have known of the prenatal clinic and transportation available to the clinic.]

Table 8
Sexually Transmitted Diseases

[Records reflect any maternal history, not just active disease in pregnancy.]

Gonorrhea	1
Condyloma accuminatum	3
Herpes simplex II	1
Chlamydia trachomatis	2

[8 of the 33 mothers had VDRL reports unavailable.]

Table 9
Parity of Mothers

Multigravidas	26
Primagravidas	8
Unknown	4

Table 10
Durham County Demographics—1989

	Total
Births among Durham County residents	3,103
Neonatal deaths among Durham County residents	41
[White, 11; Hispanic, 1; Black, 28; race unknown, 1]	

of birth weights less than 500 grams has been shown to impact greatly on infant mortality figures nationwide.[5] Wilson, et al., in a review of infant mortality in all U.S. states in 1983, demonstrated a national average of 15% of neonatal deaths occurring in babies less than 500 grams.[5] In 1989 Durham County experienced a rate more than double that—31.7% of neonatal deaths were in infants less than 500 grams. Our corrected infant mortality rate excluding these infants would be 9/1,000 live births. From the data presented, it is clear that to decrease infant mortality among Durham County residents, the incidence of prematurity must decrease.

Fewer than expected of the infants were the products of teenage pregnancies. In fact, the percentage of affected infants born to teenage mothers (23.3%) approximated the percentage of total deliveries in the county by adolescent women (21%). Dollfus, et al., showed that 3.5% of infants born in North Carolina from 1980 to 1984 were to women less than 17 years of age. The infants of these adolescent women, however, comprised 6.1% of all infant deaths.[2] Although the numbers in our study are too small for an adequate comparison, this may suggest that easier access to prenatal care and a tertiary medical center result in a reduction in the number of infant deaths to teenage mothers. Most of the mothers of affected Durham County infants were in their third and fourth decades of life, were multiparous, and had had some prenatal care. ❑

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Letters to the Editor

Comments on the Special Issue on Preventive Medicine

To the Editor:

I commend you for the excellent series of prevention articles presented in the November issue of the Journal (1990;51:589-92).We can all benefit from frequent reminders that the most effective way to cure illness is to prevent it.

Of particular interest to me was the article by Drs. Spiegel and Cole ("Smoking-Attributable Mortality, Morbidity and Economic Costs in North Carolina"), which provides an accounting of what the smoking habit costs North Carolinians each year in dollars ($1 billion+), in deaths (8,000+), and in years of potential life lost (100,000+). The numbers alone are staggering, but as the authors point out, "...The value of a North Carolinian's life to his family, to society, and to himself cannot be fully quantified..."

The month of November 1990 also saw publication of the latest volume in the Surgeon General's series on smoking and health, which this year is titled "The Health Benefits of Smoking Cessation." The message here is a positive one: smokers are not doomed to suffer excess morbidity and early death—they can avoid much of the risk they face by simply quitting. This appears to hold true for all age groups and for those who are healthy as well as those who already suffer from smoking-related diseases.

From a medical-practice standpoint the implications are clear: physicians must adopt an active role in encouraging their patients who smoke to give up the habit as soon as possible. Contrary to popular belief, physicians and other health care providers can have a powerful impact on patient smoking behavior. At Duke (smoke-free) Medical Center, our Smokers Consultation Program has provided timely counseling for thousands of hospital inpatients, with extended abstinence rates approaching 50%. Think what could be accomplished if such services were available to all North Carolinians who seek health care services each year. NCMJ readers who wish to establish an office- or hospital-based smoking cessation program for their patients are invited to contact me and I will direct them to appropriate resources. We are especially eager to share our experience with hospital administrators interested in adopting smoke-free policies for their facilities.

Again, my sincere thanks to you and to your guest editor, Dr. Ronald Levine, for your contributions to preventive medicine.

Steve Herman, Ph.D.
Director, Smokers Consultation Service
Duke University Medical Center
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To Dr. Stoodt:

I have just read the paper "Cancer of the Female Breast, Improving the Public's Health Through Early Detection" in the November issue of the *Journal* (1990;51;559-64) and must compliment you on its content and clarity. We have made progress but we have a long way to go. If everyone involved including patients, physicians, insurers, politicians and governments including their agencies will become better informed, possible priorities can be established for more effective delivery of optimum services to all women. In fact, these public health efforts could serve as models for other disease interventions. Your paper certainly contributes to a better understanding of the problems and potential solutions with breast cancer.

Robert McLelland, M.D.
Professor of Radiology
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To Dr. Stoodt:

That was a nice article on "Cancer of the Female Breast: improving the Public's Health Through Early Detection" in the current *Journal*. I was particularly interested to see that Dr. Stead chose to devote an entire issue to preventive medicine, and I give Ron Levine credit for an excellent issue. As you know, I have a personal interest in preventive medicine and have tried to encourage the members of the NCAFP to make this a part of everyday practice. I am, in fact, in the process of writing an editorial for the next issue of *North Carolina Family Physician* encouraging a preventive approach in family medicine.

I noticed the longstanding NCMS habit of calling us the North Carolina Academy of Family Practice came through again in your summary. Sooner or later they will learn who we are.

C. Christopher Bremer, M.D.
President NCAFP
P.O.Box 18469
Raleigh, NC

To Dr. Stoodt:

I was startled to find that there were no deaths from breast cancer in 1988 in North Carolina in women between the ages of 34 and 45 in your review article on "Cancer of the Female Breast" in the November issue of the *Journal*. This occurs in the second paragraph in the article as follows: "Of the 1,095

deaths from breast cancer in 1988, 1,093 were female; 39% (420) died between the ages of 45 and 64; 43% (474) between the ages of 65 and 84, with about 9% each in women 34 and younger and in women 85 and older. Seventy-nine percent (862) were white women, 21% (231) non white."

It would be interesting to know whether this is a statistical aberration, a misprint or a significant observation.

B.J. Ferguson, M.D.
Durham Clinic, P.A.
3901 Roxboro Street
Durham, NC 27704

Reply

To Dr. Ferguson:

Thank you for questioning the statement which reports no deaths from breast cancer in women ages 35 to 44. It is in error, and should read: "Of the 1,095 deaths from breast cancer in 1988, 1,093 were female; 39% (420) died between the ages of 45 and 64; 43% (474) between the ages of 65 and 84, with about 9% each in women 44 and younger (106) and in women 85 and older (93). Seventy-nine percent (862) were white women, 21% (231) non-white."

Georjean Stoodt, M.D., M.P.H.
Director, Division of Adult Health
Department of Environment, Health, and Natural Resources
Raleigh 27611

Comments on the December issue

To the Editor:

I want to congratulate you for the superb December 1990 issue of the *Journal*. The picture of Charlie Johnson on the cover is excellent. The articles are a magnificent portrayal of the changing times in North Carolina medicine. Eric Lincoln's article is poignant. I also enjoyed Mary Semans's recount of the foundation and heritage of Duke University.

John Graham's article was very educational because he gave the background biographical sketches of the giants at the University of North Carolina who helped to create their outstanding School of Medicine. The final piece which was enjoyable was the book review by Eben Alexander of Dr. Zollinger's publication on Elliott Cutler and the cloning of surgeons. It brought back many fond memories of some of my heros.

Under your stewardship, the *Journal* has changed from one that I would rarely read to one that I enjoy thumbing through shortly after arrival. Congratulations and best wishes.

William G. Anlyan, M.D.
Chancellor Emeritus
Duke University

Administration of epinephrine by laymen

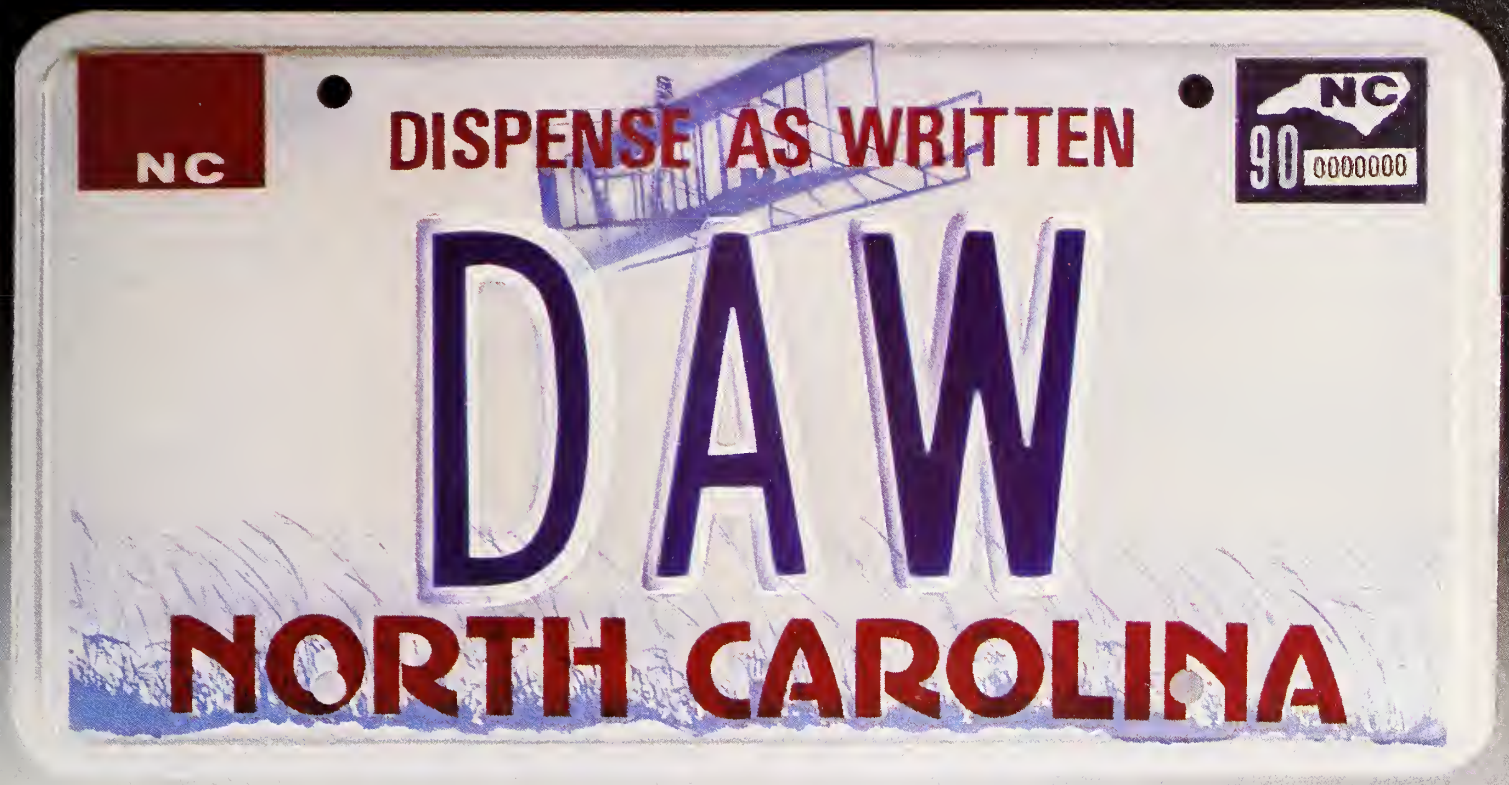
To the Editor:

The American Medical Association drafted a model bill which allows trained laymen, such as school teachers, recreational facility workers, and law enforcement officers, to administer epinephrine injections (1:1000) to anyone suffering anaphylaxis due to insect stings. The state of North Carolina has made this into law. However, it appears most physicians and non-physicians do not know of this and thus should be informed.

I have put together a simple training program, complete with slides, for physicians wishing to conduct training sessions in their area. For more information, please write to me.

Claude A. Frazier, M.D.
4-C Doctor's Park
Asheville, 28801

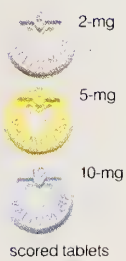




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February 27
Current Concepts in Family Practice - Update '91
Place: Greenville
Credit: 6 hours Category I, AMA
Info: Mary C. Valand, Office of Continuing Medical Education, Box 7224, Greenville 27835-7224. 919/551-5200

March 1
Update on Anxiety Disorders
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

March 1-2
Functional Neuroscience: A Review and Update
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

March 7
How to Manage a More Profitable Practice
Place: Raleigh
Info: Director, CME, Southern Medical Association, 35 Lakeshore Dr., PO Box 190088, Birmingham, AL 35219-0088. 1-800/423-4992

March 15-16
Literacy: Legacy for a Lifetime
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March 20
Risk Management
Place: Greenville
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March 20
43rd Annual Scientific Assembly
Place: Research Triangle Park
Credit: 16.25 hours, AAFP
Fee: $195
Info: Marietta Ellis, NC Academy of Family Physicians, P.O. Box 18469, Raleigh 27619. 919/847-6467

March 21
Research in Primary Care
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

March 21-22
The 15th Annual Symposium of the Lineberger Comprehensive Cancer Center - "Molecular Basis of Cancer Therapeutics"
Place: Chapel Hill
Info: Public Information Director, Lineberger Comprehensive Cancer Center, UNC School of Medicine, CB #7295, Chapel Hill, NC 27599-7295. 919/966-3036

March 21-23
Advances in Pediatric Emergency and Critical Care
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

March 22-23
Expert Medical Evaluation in Child Physical and Sexual Abuse: Advances and Controversies
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

April 5
Ninth Annual ECU Biotechnology Symposium
Place: Greenville
Credit: 7 hours Category 1, AMA
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April 19
Pediatrics Day 1991
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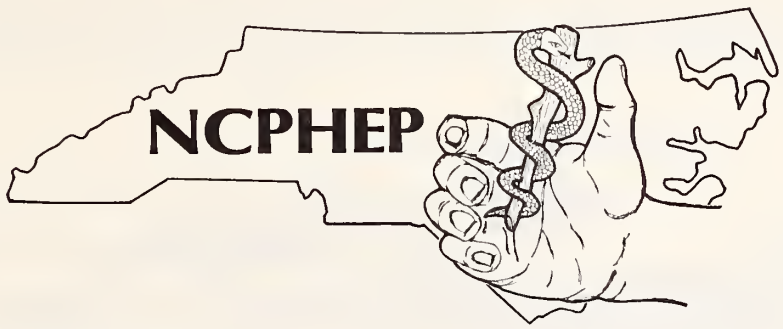
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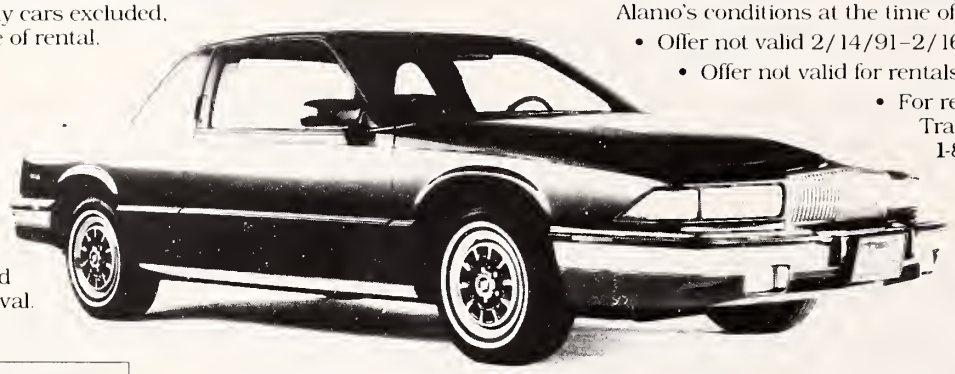
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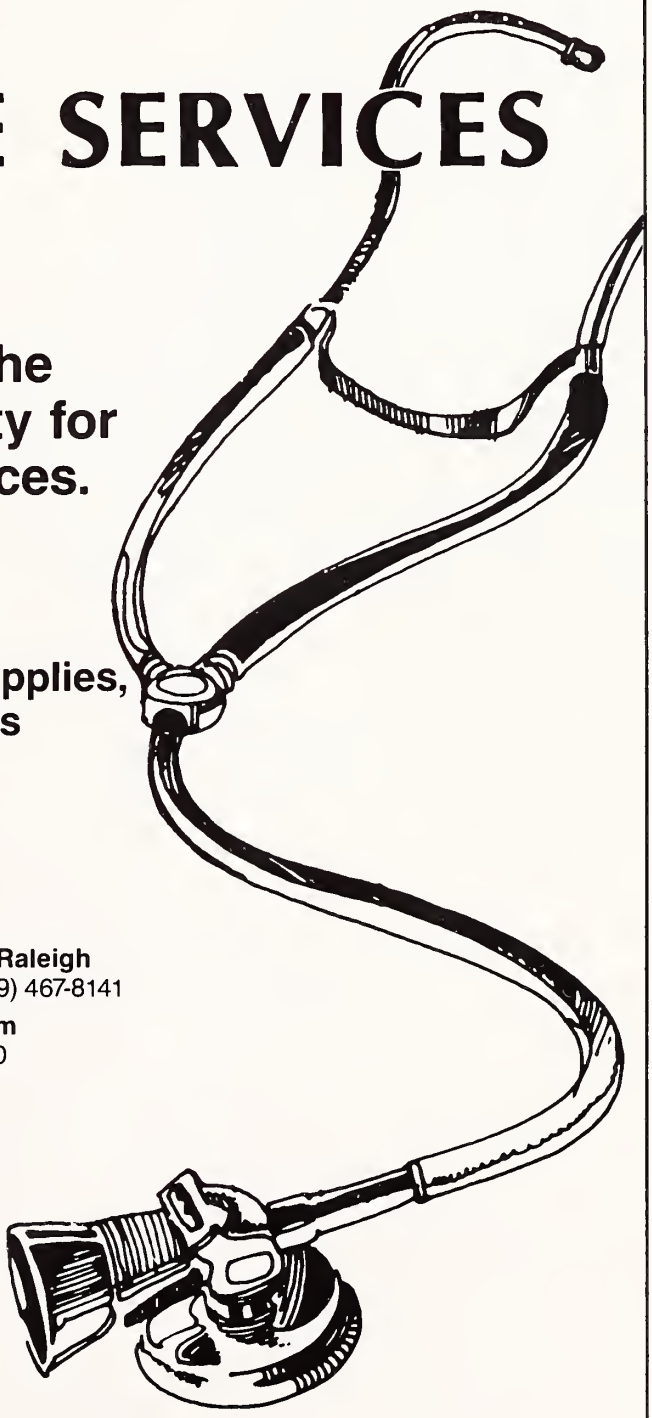
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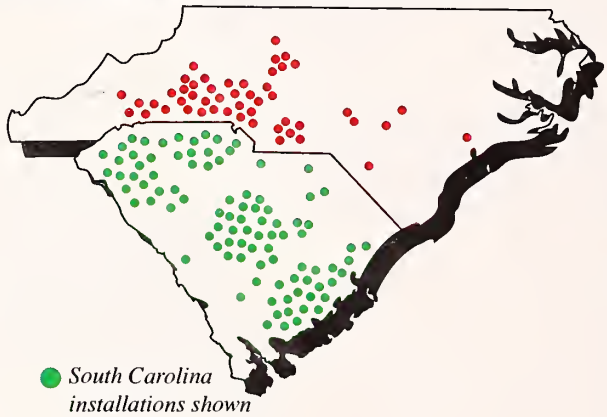
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Medical Journal

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Alleghany					
Anson					■
Ashe	■				
Avery	■				
Beaufort		■			
Bertie		■			
Bladen				■	■
Brunswick				■	
Buncombe	■				
Burke	■				
Cabarrus					■
Caldwell	■				■
Camden			■		
Carteret		■			
Caswell			■		
Catawba	■				
Chatham			■		
Cherokee	■				
Chowan		■			
Clay	■				
Cleveland	■				
Columbus				■	■
Craven		■			
Cumberland					■
Currituck			■		
Dare			■		
Davidson					■
Davie					
Duplin		■			
Durham			■		
Edgecombe			■		
Forsyth			■		■
Franklin			■		
Gaston					■
Gates		■			
Graham	■				
Granville			■		
Greene		■			
Guilford			■		■
Halifax			■		
Harnett			■		
Haywood	■				
Henderson	■				
Hertford		■			
Hoke					■
Hyde		■			
Iredell					■
Jackson	■				

COUNTY	ASHEVILLE	KINSTON	RALEIGH	WILMINGTON	SO PINES
Johnston			■		
Jones		■			
Lee			■		■
Lenoir		■			
Lincoln					■
McDowell	■				
Macon	■				
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Alphabetical Listings and Roster by Specialties within Counties

Roster information correct according to North Carolina Medical Society records on membership on January 31, 1991.

The roster information of the members of the State Medical Society contained in this publication may not be used as a general mailing list without specific authority from the State Society.

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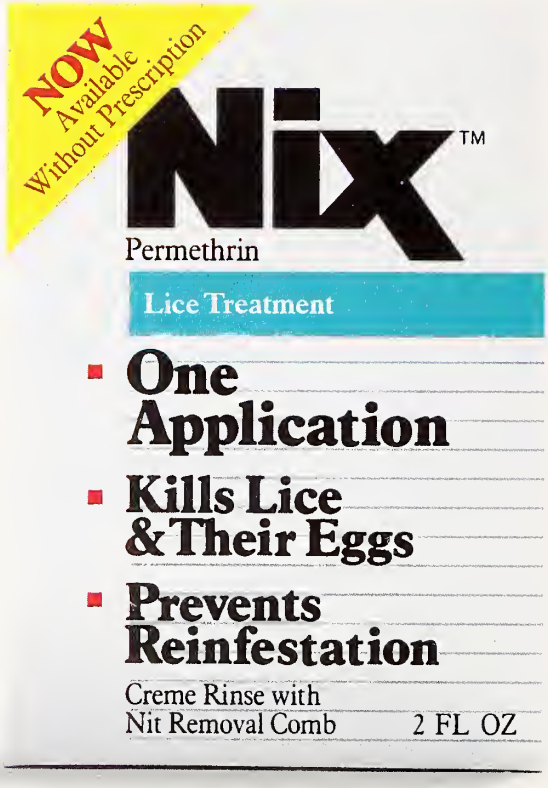
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REGULAR ACTIVE MEMBERS

Active Members of the NCMS shall be the active members of the component societies, who pay dues to the NCMS and those physicians who are admitted by the Executive Council. Each component society shall be the judge of the qualifications of its members, but, as such societies are the portals to the NCMS and the AMA, only reputable physicians holding a license to practice medicine in NC shall be admitted as active members to component societies. Active member dues are $325.00.

LIFE MEMBERS

Current members of The Society may qualify as Life Members if they have both retired from the profession of medicine and reached their 65th birthday by January 1 of the current year and have been dues paying members of The Society for 30 years; or if they have reached the age of 70 by January 1 of the current year and have been dues paying members for 20 years providing that they have been members of The Society for the prior five (5) years or exempted by Council action. They shall be exempt from all dues and assessments and shall be entitled to all the privileges enjoyed by Active Members. If members eligible for Life Membership elect to continue paying their dues and assessments, they then shall continue as active members. The time of a member's service in the Armed Forces of our country except on a career basis shall be considered as membership in The Society.

EARLY RETIREMENT MEMBERS

Physicians who have been active members of the NCMS for at least 20 years and who are fully retired from the profession of medicine may become Early Retirement Members upon payment of 50% of the regular dues for Active Members and shall have all the rights and privileges of Life Membership.

SEMI-RETIRED MEMBERS

Current physician members of the NCMS who have been dues paying members of NCMS for at least 30 years, who are at least 60 years of age, and who continue to be active in the profession of medicine but are working less than 20 hours per week may qualify for Semi-Retired Membership status. These physicians shall pay dues equal to 66% of active dues until they become eligible for Life Membership.

HONORARY MEMBERS

Honorary Members must be nominated by the Council and must receive a two-thirds vote of the members of the House of Delegates. They shall be physicians distinguished by their contributions to medicine or physicians who have displayed an exceptional interest in the welfare of the NCMS; or reflected credit and honor upon the profession. They shall be exempt from all dues and assessments and, except for the right to vote and hold office, shall be entitled to all the privileges of the NCMS.

AFFILIATE MEMBERS

Upon recommendation of the component society in which they are located, those physicians who are not licensed to practice medicine in NC may be granted Affiliate Membership by the Executive Council. They shall pay annual dues at 75% of the active dues and, except for the right to vote and hold office, shall be entitled to all the privileges of the NCMS.

ASSOCIATE MEMBERS

Upon recommendation of a component society, a physician residing in North Carolina who has been a dues paying member of a state society(ies) belonging to the AMA Federation for 20 years and is retired shall pay dues at 60% of the active member dues. Those physicians in this category who are practicing 20 hours or less per week, shall pay dues at 75% of active member dues and shall have all the rights and privileges of the NCMS with the exception of holding office.

DISABILITY EXEMPT MEMBERS

Current members of the NCMS whose disability is certified by their component society and who are retired from the profession of medicine shall be exempt from all dues and assessments and shall have all the rights and privileges of active members except the right to vote or hold office.

CONDITIONAL MEMBERS

A physician who has applied for membership in The Society but whose application process has not been completed through the county society shall be granted a conditional membership for a period of one year upon payment of State Society dues. If at the end of this period, an applicant has not completed the county society application process, membership in The Society will be terminated and dues refunded in full. Except for the right to vote and hold office the conditional member shall be entitled to all the rights and privileges of The Society.

RESIDENT/FELLOW MEMBERS

Physicians who are in training in hospitals in the US, which are accredited by the Joint Commission on Accreditation of Hospitals for residency training who are licensed to practice in NC may be admitted to membership in the NCMS directly or through membership in a component medical society for and during the period of time in which they are engaged in training. They shall have the same rights and privileges as active members and shall pay NCMS dues of $20.00.

STUDENT MEMBERS

Any student who is regularly enrolled as a candidate for the degree of Doctor of Medicine in a NC medical school is eligible for NCMS student membership. These members shall enjoy all the rights and privileges of membership except voting for members of Boards or Commissions who are appointed or elected by the NCMS according to State Law. They shall pay dues of $10.00.



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Committee and Commission Appointments 1990-1991

The committees listed herein have been authorized by President Edwin W. Monroe, MD, and/or as required under the Constitution and Bylaws and the Procedure and Policy Manual. Particular note should be taken of the authorization of the HOUSE OF DELEGATES of a commission form of organization activity and that all committees, excepting MEDIATION COMMITTEE, NOMINATING COMMITTEE, PLANNING COUNCIL, COORDINATING COUNCIL OF SPECIALTY SOCIETIES, and COMPENSATION COMMITTEE are segregated under the respective commission in which the function of the committee logically rests. This will tend to eliminate overlapping and duplication in activity programs and result in coordination of the work of the Society in a manner to lessen the work of the Delegates during the Annual Meeting of the HOUSE OF DELEGATES.

(Superior figures (e.g. 21) indicate the component county society from which the member emanates, as in the membership list of the ROSTER.)

COMMISSION I
Administration
Edgar C. Garrabrant, MD, Commissioner (919-787-7171)
PO Box 18946, Raleigh 27619

	Committee Listing
1. Audit Committee (I-1) William R. Hudson, MD, Chair (919-684-3834) Duke University Medical Center, Durham 27710	No. 3
2. Finance Committee (I-2) Carolyn R. Ferree, MD, Chair (919-748-4981) 300 S. Hawthorne Rd., Winston-Salem 27103	No. 18
3. Membership Committee (I-3) Charles L. Garrett, Jr, MD, Chair (919-353-3498) Onslow Memorial Hospital, Jacksonville 28541	No. 26
4. Membership Services & Benefits Committee (I-4) T. Reginald Harris, MD, Chair (704-482-1482) 808 Schenck St., Shelby 28150	No. 27

COMMISSION II
Advisory and Study
Elizabeth P. Kanof, MD, Commissioner (919-878-0310)
3400 Executive Drive, Ste. 207, Raleigh 27609

	Committee Listing
1. Auxiliary Advisory Committee (II-1) Charles L. Nance, MD, Chair (919-763-7344) 2001 S. 17th St., Wilmington 28401	No. 4
2. Bioethics Committee (II-2) George C. Barrett, MD, Chair (704-365-2878) 6913 Huntfield Dr., Charlotte 28226	No. 5
3. Cancer Committee (II-3) M. Robert Cooper, MD, Co-Chair (919-748-4300) 300 S. Hawthorne Rd., Winston-Salem 27103 Avery W. McMurry, MD, Co-Chair (704-482-6359) 207 Lee St., Shelby 28150	No. 6
4. Professional Insurance Committee (II-4) Charles M. Hassell, Jr, MD, Chair (919-379-4074) 1200 N. Elm St., Greensboro 27401	No. 33
5. Traffic Safety Committee (II-5) George Johnson, Jr, MD, Chair (919-966-3391) UNC, Dept. of Surgery, CB#7210, Chapel Hill 27599	No. 38

COMMISSION III
Annual Convention
Jack W. Bonner, MD, Commissioner (704-254-3201)
Highland Hospital, PO Box 1101, Asheville 28802

	Committee Listing
1. Arrangements Committee (III-1) C. Christopher Bremer, MD, Chair (919-551-2601) ECU, Family Medicine Dept., Brody Bldg., 4N78, Greenville 27858	No. 2
2. Constitution & Bylaws Committee (III-2) Alfred L. Ferguson, MD, Chair (919-752-8880) 6 Doctors Park, Greenville 27834	No. 11
3. Credentials Committee (III-3) Louis R. Wilkerson, MD, Chair (919-571-1040) 4420 Lake Boone Tr., Ste. 302, Raleigh 27607	No. 13
4. Medical Education Committee (III-4) Preston A. Walker, MD, Chair (919-851-4780) 5207 Hawkesbury Ln., Raleigh 27606	No. 24
5. Risk Management Committee (III-5) Thomas F. O'Brien, Jr, MD, Chair (919-551-2149) ECU, Brody Bldg., AD37-A, Greenville 27858	No. 35

COMMISSION IV
Professional Service
Carl S. Phipps, MD, Commissioner (919-760-5960)
3333 Silas Creek Pkwy., Winston-Salem 27103

	Committee Listing
1. Aging Committee (IV-1) James S. Parsons, MD, Chair (919-832-5125) 704 W. Jones St., Raleigh 27603	No. 1
2. Disaster & Emergency Medical Care Committee (IV-2) Joseph A. Moylan, MD, Chair (919-684-2237) Duke University Medical Center, Box 3947, Durham 27710	No. 14
3. Environmental Health Committee (IV-3) James B. Tenney, MD, Chair (704-255-5671) 32 Hoyt Rd., Arden 28704	No. 16
4. N. C. Industrial Commission Liaison Committee (IV-4) Robert B. Nelson, MD Chair (919-781-5600) PO Box 10707, Raleigh 27605	No. 30
5. Third Party Relations Committee (IV-5) James P. Weaver, MD, Chair (919-479-4100) PO Box 15249, Durham 27704	No. 37

COMMISSION V
Public Affairs
Robert W. Carter, MD, Commissioner (919-227-3621)
Kernodle Clinic, 316 N. Graham-Hopedale Rd., Burlington 27217

Committee Listing

1. Communications Committee (V-1) No. 9
Edward M. Hedgpeth, Jr, MD, Chair (919-682-9341)
1110 W. Main St., Durham 27701

2. Eye Care & Eye Bank Committee (V-2) No. 17
James L. Kesler, MD, Chair (919-763-7316)
1120 Medical Center Dr., Wilmington 28401

3. Legislation Committee (V-3) No. 20
H. David Bruton, MD, Chair (919-692-2444)
195 W. Illinois Ave., Southern Pines 28387

4. Medical Aspects of Sports Committee (V-4) No. 23
Frank W. Clippinger, Jr, MD, Chair (919-684-4229)
Duke University Medical Center, Box 3935, Durham 27710

5. Medical-Legal Committee (V-5) No. 25
Joseph M. Jenkins, MD, Chair (919-946-9045)
210 Riverside Dr., Washington 27889

COMMISSION VI
Public Service
Thad B. Wester, MD, Commissioner (919-733-4984)
1001 Brighthurst Dr., Apt. 101, Raleigh 27605

Committee Listing

1. Drug Abuse & Pharmacy Committee (VI-1) No. 15
Ronald B. Mack, MD, Chair (919-727-8108)
2516 Woodberry Dr., Winston-Salem 27106

2. Health Care Access Committee (VI-2) No. 19
Donald T. Lucey, MD, Chair (919-781-7113)
2800 Blue Ridge Blvd., Ste. 403, Raleigh 27607

3. Physicians Health & Effectiveness Committee (VI-3) No. 31
Robert A. Fleury, MD, Chair (919-692-6471)
PO Box 56, Southern Pines 28387

4. Sexually Transmitted Diseases & AIDS Committee (VI-4) No. 36
Myron S. Cohen, MD, Chair (919-966-2536)
UNC, 547 Burnett-Womack Bldg., 229-H, Chapel Hill 27599

COMMISSION VII
Health Services
Robert G. Brame, MD, Commissioner (919-551-5200)
ECU, OBG Dept., Greenville 27858

Committee Listing

1. Child Health Committee (VII-1) No. 7
Charles K. Scott, MD, Chair (919-228-8316)
530 W. Webb Ave., Burlington 27215

2. Children's Special Health Services Advisory Committee (VII-2) No. 8
Page Anderson, MD, Chair (919-681-2916)
Duke University Medical Center, Box 3218, Durham 27710

3. Maternal Health Committee (VII-3) No. 21
Robert G. Brame, MD, Chair (919-551-5200)
ECU, OBG Dept., Greenville 27858

4. Mental Health Committee (VII-4) No. 28
Charles R. Vernon, MD, Chair (919-256-4106)
7230 Wrightsville Ave., Wilmington 28403

5. Rehabilitation Medicine Committee (VII-5) No. 34
Angus M. McBryde, Jr, MD, Chair (704-377-0351)
120 Providence Rd., Charlotte 28207

COMMITTEES NOT ASSIGNED TO A COMMISSION

Committee Listing

1. COMPENSATION COMMITTEE No. 10
Edwin W. Monroe, MD, Chair (919-723-1456)
1257 Kent Place Ln., Winston-Salem 27104

2. COORDINATING COUNCIL OF SPECIALTY SOCIETIES No. 12
Dale R. Shaw, MD, Chair (704-365-1945)
PO Box 36937, Charlotte 28236

3. MEDIATION COMMITTEE No. 22
Kenneth E. Cosgrove, MD, Chair (704-692-2231)
510 7th Ave., W., Hendersonville 28739
Ernest B. Spangler, MD, Secretary (919-854-6546)
Drawer X-3, Greensboro 27402

4. NOMINATING COMMITTEE No. 29
John R. Kernodle, MD, Chair (919-584-7075)
2465 Edgewood Ave., Burlington 27215

5. PLANNING COUNCIL No. 32
Thomas B. Dameron, Jr, MD, Chair (919-781-5600)
PO Box 10707, Raleigh 27605

1. Aging Committee IV-1 (12)(4 Consultants)
James S. Parsons, MD[92] (IM/GER)(919-832-5125) **Chair**
704 W. Jones St., Raleigh 27603
Chasse M. Bailey[74] (ST)(ECU)(919-830-9448)
P-6 Doctor's Park Apts., Beasley Dr., Greenville 27834
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Judith C. Wright (Health Director)(919-793-3023)
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2. Arrangements Committee III-1 (13)(3 Consultants)
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PO Box 625, Pinehurst 28374
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Helen Boyette (Edward)(Auxiliary President)(919-285-2721)
PO Box 65, Chinquapin 28521
Connie Parker (William)(Auxiliary President-Elect)(919-343-0724)
1901 S. Live Oak Pkwy., Wilmington 28403

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Dale R. Shaw, MD[60] (DR)(704-362-1945)
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Consultants:
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Connie Parker (William)(Auxiliary First Vice-President)(919-343-0724)
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Bioethics Committee II-2 (24)(4 Consultants)
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Consultants:
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Presbyterian Hospital, PO Box 33549, Charlotte 28233
Rosemarie Tong, Ph.D. (704-892-2000)
Davidson College, PO Box 1303, Davidson 28036

6. Cancer Committee II-3 (28)(Legal — 1 ea. Congressional District)
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Avery W. McMurry, MD[23] (GS)(10th)(704-482-6359) **Co-Chair**
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Rupert C. Anderson, MD[18] (GS)(704-322-8485)
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2215 Randolph Rd., Charlotte 28207
Albert L. Wiley, Jr, MD[74] (TR/NM)(919-551-2900)
ECU, Cancer Center, Greenville 27858
James E. Wortman, MD[65] (IM/ON)(7th)(919-251-0811)
1912 Meeting Court, Wilmington 28401
Thomas J. Zuber, MD[51] (FP/GER)(919-894-2011)
PO Box 699, Benson 27504

7. Child Health Committee VII-1 (13)(1 Consultant)
Charles K. Scott, MD[1] (PD/ADL)(919-228-8316) **Chair**
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John E. Eisele, MD[74] (PD/PM)(919-551-4440)
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Thomas G. Irons, MD[74] (PD)(919-551-2983)
ECU, Office of Dean, AD-37, Greenville 27858
Alex R. Kemper[32] (ST)(DUKE)(919-684-5681)
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Thad B. Wester, MD[92] (PH/PD)(919-733-4984)
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Eugene C. Hines, Jr, Health Director(919-775-3603)
Lee County Health Dept., PO Box 158, Sanford 27331

8. Children's Special Health Services Advisory Committee VII-2 (13) (3 Consultants)
Page Anderson, MD[32] (PDC)(919-681-2916) **Chair**
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Ralph W. Coonrad, MD[32] (ORS/HS)(919-286-1249)
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Dept. of Human Resources, Maternal & Child Care Section,
1330 St. Mary's St., Raleigh 27605
Jerry W. Wiley, MD (PD)(919-733-7437)
Dept. of Human Resources, Maternal & Child Care Section,
1330 St. Mary's St., Raleigh 27605

9. Communications Committee V-I (20)(2 Consultants)
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COUNCILOR DISTRICTS
Constitution and Bylaws of the North Carolina Medical Society

Article VI — Section and District Societies

The House of Delegates may divide the scientific work of The Society into appropriate sections, and organize such councilor district societies composed of members of component societies, as will promote the interests of the profession.

Chapter VII — Councilor Districts

Section 1. To facilitate the organization of the medical profession, the State of North Carolina hereby is divided by counties into eighteen councilor districts as follows:

Councilor Districts

The State of North Carolina is divided by counties into eighteen Councilor Districts as follows:

First District — Bertie-Gates-Hertford, Chowan-Perquimans, and Pasquotank-Camden-Currituck-Dare.

Second District — Beaufort-Hyde-Martin-Washington-Tyrrell, Carteret, Craven-Pamlico-Jones, Lenoir-Greene and Pitt.

Third District — Edgecombe, Halifax, Johnston, Nash, Northampton, Warren, Wayne, and Wilson.

Fourth District — New Hanover-Pender.

Fifth District — Bladen, Brunswick, Columbus, Duplin, Harnett, Onslow, Robeson, and Sampson.

Sixth District — Wake.

Seventh District — Durham-Orange.

Eighth District — Cumberland.

Ninth District — Alamance-Caswell, Chatham, Franklin, Granville, Lee, Person, Randolph, Rockingham, and Vance.

Tenth District — Guilford (Greensboro and High Point).

Eleventh District — Forsyth-Stokes-Davie.

Twelfth District — Anson, Cabarrus, Hoke, Montgomery, Moore, Richmond, Scotland, Stanly and Union.

Thirteenth District — Mecklenburg.

Fourteenth District — Alleghany, Ashe, Davidson, Iredell, Rowan, Surry-Yadkin, and Wilkes.

Fifteenth District — Alexander, Avery, Burke, Caldwell, Catawba, Mitchell-Yancey, and Watauga.

Sixteenth District — Cleveland, Gaston, Lincoln, McDowell, and Rutherford.

Seventeenth District — Cherokee, Graham, Haywood, Henderson, Jackson, Macon-Clay, Polk, Swain, and Transylvania.

Eighteenth District — Buncombe and Madison.

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†	DECEASED
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32	COMPONENT SOCIETY CODE (SEE KEY BELOW)
A	AMA MEMBER
P	MEDPAC MEMBER
*	ATTENDED ANNUAL MEETING
AC	TYPE OF MEMBERSHIP (SEE KEY BELOW)

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AC	TYPE OF MEMBERSHIP (SEE KEY BELOW)
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60	YEAR LICENSED
64	YEAR JOINED STATE SOCIETY
YALE	MEDICAL SCHOOL

KEY TO SPECIALTIES

A	Allergy
ABS	Abdominal Surgery
ADL	Adolescent Medicine
ADM	Administrative Medicine
AI	Allergy & Immunology
ALD	Alcohol & Drug Abuse
AM	Aerospace Medicine
AN	Anesthesiology
BE	Broncho-Esophagology
BLB	Bloodbanking
CC	Critical Care
CD	Cardiovascular Diseases
CDS	Cardiovascular Surgery
CHN	Child Neurology
CHP	Child Psychiatry
CLP	Clinical Pathology
CRS	Colon & Rectal Surgery
D	Dermatology
DIA	Diabetes
DMP	Dermatopathology
DR	Diagnostic Radiology
EM	Emergency Medicine
END	Endocrinology
FOP	Forensic Pathology
FP	Family Practice
FPY	Forensic Psychiatry
GE	Gastroenterology
GER	Geriatrics
GP	General Practice
GPM	General Preventive Medicine
GS	General Surgery
GYN	Gynecology
HEM	Hematology
HNS	Head & Neck Surgery
HS	Hand Surgery
HYP	Hypnosis
ID	Infectious Diseases
IG	Immunology
IM	Internal Medicine
IND	Industrial Medicine
LAR	Laryngology
LM	Legal Medicine
MFS	Maxillofacial Surgery
N	Neurology
NA	Neuropathology
ND	Neoplastic Diseases
NEP	Nephrology
NER	Radiology, Neuro
NM	Nuclear Medicine
NP	Psychiatry, Neurology
NPM	Neonatal-Perinatal Medicine
NR	Nuclear Radiology
NS	Neurological Surgery
NTR	Nutrition
OBG	Obstetrics & Gynecology
OBS	Obstetrics
OM	Occupational Medicine
ON	Oncology
OPH	Ophthalmology
ORS	Orthopaedic Surgery
OS	Other Specialty
OT	Otology
OTO	Otorhinolaryngology
P	Psychiatry
PA	Clinical Pharmacology
PD	Pediatrics
PDA	Allergy Pediatrics
PDC	Cardiology Pediatrics
PDE	Endocrinology Pediatrics
PDR	Pediatric Radiology
PDS	Pediatric Surgery
PH	Public Health
PHO	Pediatric Hematology-Oncology
PM	Physical Med. & Rehabilitation
PNP	Pediatric Nephrology
PS	Plastic Surgery
PSF	Facial Plastic Surgery
PTH	Pathology
PUD	Pulmonary Diseases
PYA	Psychoanalysis
PYM	Psychosomatic Medicine
R	Radiology
RHI	Rhinology
RHU	Rheumatology
RIP	Radioisotopic Pathology
SM	Sports Medicine
TR	Therapeutic Radiology
TRS	Traumatic Surgery
TS	Thoracic Surgery
U	Urological Surgery
VS	Vascular Surgery

COMPONENT SOCIETY CODES

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2	ALEXANDER
3	ALLEGHANY
4	ANSON
5	ASHE
6	AVERY
7	BEAUFORT-HYDE-MARTIN-WASHINGTON-TYRRELL
8	BERTIE-GATES-HERTFORD
9	BLADEN
10	BRUNSWICK
11	BUNCOMBE
12	BURKE
13	CABARRUS
14	CALDWELL
	CAMDEN (SEE #70)
16	CARTERET
	CASWELL (SEE #1)
18	CATAWBA
19	CHATHAM
20	CHEROKEE
21	CHOWAN-PERQUIMANS
	CLAY (SEE #56)
23	CLEVELAND
24	COLUMBUS
25	CRAVEN-PAMLICO-JONES
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	CURRITUCK (SEE #70)
	DARE (SEE #70)
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	DAVIE (SEE #34)
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32	DURHAM-ORANGE
33	EDGECOMBE
34	FORSYTH-STOKES-DAVIE
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	GATES (SEE #8)
	GRAHAM (SEE #20)
39	GRANVILLE
	GREENE (SEE #54)
40	HIGH POINT
41	GREENSBORO
42	HALIFAX
43	HARNETT
44	HAYWOOD
45	HENDERSON
	HERTFORD (SEE #8)
47	HOKE
	HYDE (SEE #7)
49	IREDELL
50	JACKSON
51	JOHNSTON
	JONES (SEE #25)
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54	LENOIR-GREENE
55	LINCOLN
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57	MADISON
	MARTIN (SEE #7)
59	MCDOWELL
60	MECKLENBURG
61	MITCHELL-YANCEY
62	MONTGOMERY
63	MOORE
64	NASH
65	NEW HANOVER-PENDER
66	NORTHAMPTON
67	ONSLOW
	ORANGE (SEE #32)
	PAMLICO (SEE #25)
70	PASQUOTANK-CAMDEN-CURRITUCK-DARE
	PENDER (SEE #65)
	PERQUIMANS (SEE #21)
73	PERSON
74	PITT
75	POLK
76	RANDOLPH
77	RICHMOND
78	ROBESON
79	ROCKINGHAM
80	ROWAN
81	RUTHERFORD
82	SAMPSON
83	SCOTLAND
84	STANLY
	STOKES (SEE #34)
86	SURRY-YADKIN
87	SWAIN
88	TRANSYLVANIA
	TYRRELL (SEE #7)
90	UNION
91	VANCE
92	WAKE
93	WARREN
	WASHINGTON (SEE #7)
95	WATAUGA
96	WAYNE
97	WILKES
98	WILSON
	YADKIN (SEE #86)
	YANCEY (SEE #61)

TYPE OF MEMBERSHIP CODES

AC	ACTIVE
AF	AFFILIATE
AS	ASSOCIATE
C	CONDITIONAL
DE	DISABILITY EXEMPT
ER	EARLY RETIRED
H	HONORARY
L	LIFE
L/RT	LIFE/RETIRED
M	MILITARY
R	RESIDENT
RT	RETIRED
S/RT	SEMI-RETIRED
S	STUDENT

One Of A Kind

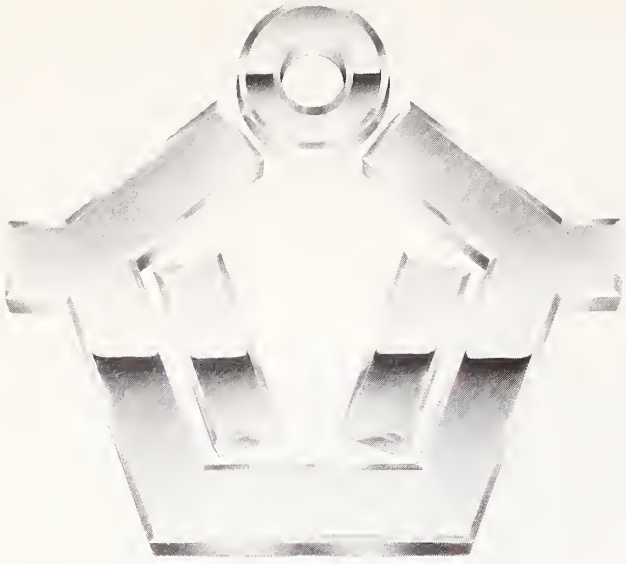


Zantac®

ranitidine HCl/Glaxo 150 mg and 300 mg tablets

Please see Brief Summary of Prescribing Information on adjacent page.

Glaxo/ ROCHE



One Of A Kind

Zantac®

ranitidine HCl/Glaxo 150 mg and 300 mg tablets

Zantac® 150 Tablets
(ranitidine hydrochloride)

Zantac® 300 Tablets
(ranitidine hydrochloride)

Zantac® Syrup
(ranitidine hydrochloride)

BRIEF SUMMARY

The following is a brief summary only. Before prescribing, see complete prescribing information in Zantac® product labeling.

INDICATIONS AND USAGE: Zantac® is indicated in:
1. Short-term treatment of **active duodenal ulcer.** Most patients heal within four weeks.
2. **Maintenance therapy** for duodenal ulcer patients at reduced dosage after healing of acute ulcers.
3. The treatment of **pathological hypersecretory conditions** (eg, Zollinger-Ellison syndrome and systemic mastocytosis).
4. Short-term treatment of **active, benign gastric ulcer.** Most patients heal within six weeks and the usefulness of further treatment has not been demonstrated.
5. Treatment of **gastroesophageal reflux disease (GERD).** Symptomatic relief commonly occurs within one or two weeks after starting therapy. Therapy for longer than six weeks has not been studied.

In active duodenal ulcer; active, benign gastric ulcer; hypersecretory states; and GERD, concomitant antacids should be given as needed for relief of pain.

CONTRAINDICATIONS: Zantac® is contraindicated for patients known to have hypersensitivity to the drug.

PRECAUTIONS:

General: 1. Symptomatic response to Zantac® therapy does not preclude the presence of gastric malignancy.
2. Since Zantac is excreted primarily by the kidney, dosage should be adjusted in patients with impaired renal function (see DOSAGE AND ADMINISTRATION). Caution should be observed in patients with hepatic dysfunction since Zantac is metabolized in the liver.

Laboratory Tests: False-positive tests for urine protein with Multistix® may occur during Zantac therapy, and therefore testing with sulfosalicylic acid is recommended.

Drug Interactions: Although Zantac has been reported to bind weakly to cytochrome P-450 *in vitro,* recommended doses of the drug do not inhibit the action of the cytochrome P-450-linked oxygenase enzymes in the liver. However, there have been isolated reports of drug interactions that suggest that Zantac may affect the bioavailability of certain drugs by some mechanism as yet unidentified (eg, a pH-dependent effect on absorption or a change in volume of distribution).

Carcinogenesis, Mutagenesis, Impairment of Fertility: There was no indication of tumorigenic or carcinogenic effects in lifespan studies in mice and rats at doses up to 2,000 mg/kg/d.

Ranitidine was not mutagenic in standard bacterial tests (*Salmonella, Escherichia coli*) for mutagenicity at concentrations up to the maximum recommended for these assays.

In a dominant lethal assay, a single oral dose of 1,000 mg/kg to male rats was without effect on the outcome of two matings per week for the next nine weeks.

Pregnancy: ***Teratogenic Effects: Pregnancy Category B:*** Reproduction studies have been performed in rats and rabbits at doses up to 160 times the human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Zantac. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: Zantac is secreted in human milk. Caution should be exercised when Zantac is administered to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

Use in Elderly Patients: Ulcer healing rates in elderly patients (65 to 82 years of age) were no different from those in younger age groups. The incidence rates for adverse events and laboratory abnormalities were also not different from those seen in other age groups.

ADVERSE REACTIONS: The following have been reported as events in clinical trials or in the routine management of patients treated with Zantac®. The relationship to Zantac therapy has been unclear in many cases. Headache, sometimes severe, seems to be related to Zantac administration.

Central Nervous System: Rarely, malaise, dizziness, somnolence, insomnia, and vertigo. Rare cases of reversible mental confusion, agitation, depression, and hallucinations have been reported, predominantly in severely ill elderly patients. Rare cases of reversible blurred vision suggestive of a change in accommodation have been reported.

Cardiovascular: As with other H_2-blockers, rare reports of arrhythmias such as tachycardia, bradycardia, atrioventricular block, and premature ventricular beats.

Gastrointestinal: Constipation, diarrhea, nausea/vomiting, abdominal discomfort/pain, and rare reports of pancreatitis.

Hepatic: In normal volunteers, SGPT values were increased to at least twice the pretreatment levels in 6 of 12 subjects receiving 100 mg qid intravenously for seven days, and in 4 of 24 subjects receiving 50 mg qid intravenously for five days. There have been occasional reports of hepatitis, hepatocellular or hepatocanalicular or mixed, with or without jaundice. In such circumstances, ranitidine should be immediately discontinued. These events are usually

Zantac® 150 and 300 (ranitidine hydrochloride) Tablets
Zantac® (ranitidine hydrochloride) Syrup

reversible, but in exceedingly rare circumstances death has occurred.

Musculoskeletal: Rare reports of arthralgias.

Hematologic: Blood count changes (leukopenia, granulocytopenia, thrombocytopenia) have occurred in a few patients. These were usually reversible. Rare cases of agranulocytosis, pancytopenia, sometimes with marrow hypoplasia, and aplastic anemia have been reported.

Endocrine: Controlled studies in animals and man have shown no stimulation of any pituitary hormone by Zantac and no antiandrogenic activity, and cimetidine-induced gynecomastia and impotence in hypersecretory patients have resolved when Zantac has been substituted. However, occasional cases of gynecomastia, impotence, and loss of libido have been reported in male patients receiving Zantac, but the incidence did not differ from that in the general population.

Integumentary: Rash, including rare cases suggestive of mild erythema multiforme, and, rarely, alopecia.

Other: Rare cases of hypersensitivity reactions (eg, bronchospasm, fever, rash, eosinophilia), anaphylaxis, angioneurotic edema, and small increases in serum creatinine.

OVERDOSAGE: Information concerning possible overdosage and its treatment appears in the full prescribing information.

DOSAGE AND ADMINISTRATION: (See complete prescribing information in Zantac® product labeling).

Active Duodenal Ulcer: The current recommended adult oral dosage is 150 mg or 10 ml (2 teaspoonfuls equivalent to 150 mg of ranitidine) twice daily. An alternate dosage of 300 mg or 20 ml (4 teaspoonfuls equivalent to 300 mg of ranitidine) once daily at bedtime can be used for patients in whom dosing convenience is important. The advantages of one treatment regimen compared to the other in a particular patient population have yet to be demonstrated.

Maintenance Therapy: The current recommended adult oral dosage is 150 mg or 10 ml (2 teaspoonfuls equivalent to 150 mg of ranitidine) at bedtime.

Pathological Hypersecretory Conditions (such as Zollinger-Ellison syndrome): The current recommended adult oral dosage is 150 mg or 10 ml (2 teaspoonfuls equivalent to 150 mg of ranitidine) twice a day. In some patients it may be necessary to administer Zantac® 150-mg doses more frequently. Doses should be adjusted to individual patient needs, and should continue as long as clinically indicated. Doses up to 6 g/d have been employed in patients with severe disease.

Benign Gastric Ulcer: The current recommended adult oral dosage is 150 mg or 10 ml (2 teaspoonfuls equivalent to 150 mg of ranitidine) twice a day.

GERD: The current recommended adult oral dosage is 150 mg or 10 ml (2 teaspoonfuls equivalent to 150 mg of ranitidine) twice a day.

Dosage Adjustment for Patients with Impaired Renal Function: On the basis of experience with a group of subjects with severely impaired renal function treated with Zantac, the recommended dosage in patients with a creatinine clearance less than 50 ml/min is 150 mg or 10 ml (2 teaspoonfuls equivalent to 150 mg of ranitidine) every 24 hours. Should the patient's condition require, the frequency of dosing may be increased to every 12 hours or even further with caution. Hemodialysis reduces the level of circulating ranitidine. Ideally, the dosage schedule should be adjusted so that the timing of a scheduled dose coincides with the end of hemodialysis.

HOW SUPPLIED: Zantac® 300 Tablets (ranitidine hydrochloride equivalent to 300 mg of ranitidine) are yellow, capsule-shaped tablets embossed with "ZANTAC 300" on one side and "Glaxo" on the other. They are available in bottles of 30 (NDC 0173-0393-40) tablets and unit dose packs of 100 (NDC 0173-0393-47) tablets.

Zantac® 150 Tablets (ranitidine hydrochloride equivalent to 150 mg of ranitidine) are white tablets embossed with "ZANTAC 150" on one side and "Glaxo" on the other. They are available in bottles of 60 (NDC 0173-0344-42) and 100 (NDC 0173-0344-09) tablets and unit dose packs of 100 (NDC 0173-0344-47) tablets.

Store between 15° and 30° C (59° and 86° F) in a dry place. Protect from light. Replace cap securely after each opening.

Zantac® Syrup, a clear, peppermint-flavored liquid, contains 16.8 mg of ranitidine hydrochloride equivalent to 15 mg of ranitidine per 1 ml in bottles of 16 fluid ounces (one pint) (NDC 0173-0383-54).

Store between 4° and 25° C (39° and 77° F). Dispense in tight, light-resistant containers as defined in the USP/NF.

July 1990

Glaxo Pharmaceuticals
DIVISION OF GLAXO INC.
Research Triangle Park, NC 27709

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Roche Laboratories presents the winners of the 1990

ROCHE

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Linda Kay Clark



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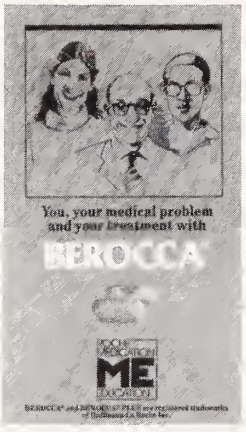
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COMMITTED TO TOTAL HEALTH CARE

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ROCHE ME MEDICATION EDUCATION



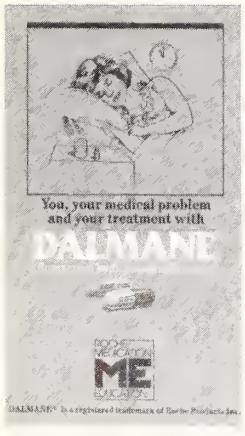


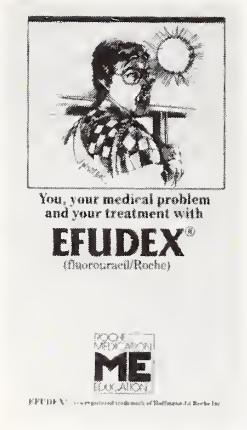
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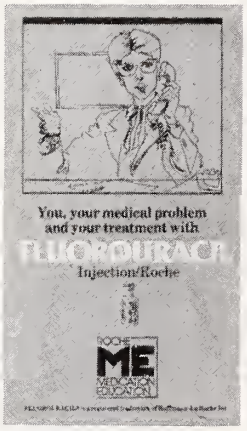
Each booklet helps you provide...

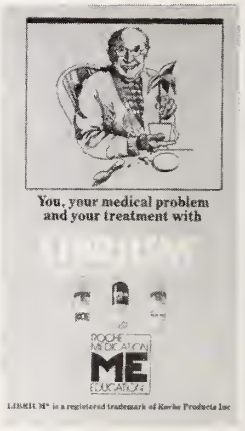
- Reinforcement of your instructions
- Enhancement of compliance
- Satisfaction with office visits

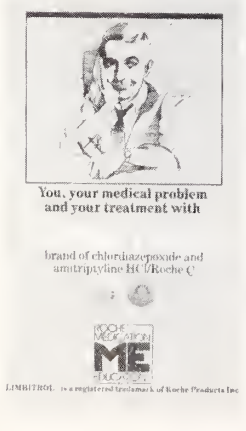
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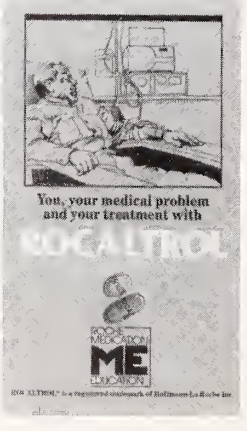


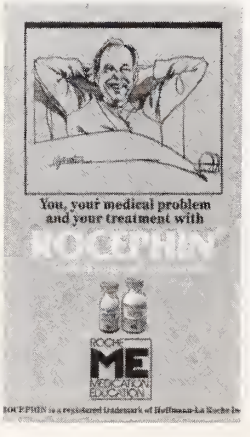


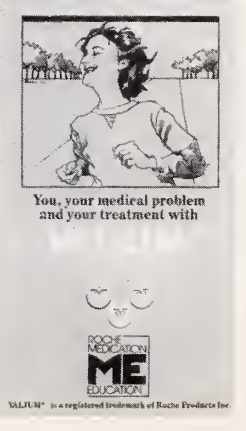












Alphabetical List of Members for 1990-1991

The number in small type following each name indicates the component society under which the member is listed in the Roster by component societies.

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Rambo, V. Birch, 235 Inman Dr., BP 117, Decatur, GA 30030.
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(See Page 26 for Key to Specialties)

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1540 GARDEN TERRACE #305 R
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FAX 704 867-0738

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RALEIGH 27605 919 832-1205

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129 CRAWFORD PARKWAY S
PORTSMOUTH, VA 23704 919 722-7946

ALEXANDER, EBEN, JR. NS 034
BOWMAN GRAY SCH. OF MED. A L
WINSTON-SALEM 27103 919 748-4082
FAX 919 748-4204

ALEXANDER, H. ANTHONY IM 029
1632 NATIONAL HIGHWAY A * AC
THOMASVILLE 27360 919 885-7311

ALEXANDER, HENCY C., JR. IM /PUD 060
733 PLANTATION ESTATES DR. A RT
B-205
MATTHEWS 28105 704 841-1025

ALEXANDER, JAMES FROSST IM /GE 060
3535 RANDOLPH ROAD A AC
CHARLOTTE 28211 704 365-0760

ALEXANDER, JAMES MOSES IM 060
225 PERRIN PL. A L/RT
CHARLOTTE 28207 704 365-0760

ALEXANDER, JAMES PORTER OM /IM 060
DUKE POWER CO. A AC
PO BOX 1007, WCO8C
CHARLOTTE 28201 704 373-4329

ALEXANDER, JAMES RAY GE 011
49 MCDOWELL ST. A P AC
ASHEVILLE 28801 704 258-3870

ALEXANDER, JOSEPH BLACK IM 078
395 W. 27TH STREET A RT
LUMBERTON 28358 919 739-7551

ALEXANDER, KERRY ANTHONY 060
CAROLINAS MEDICAL CENTER R
PO BOX 32861
CHARLOTTE 28232 704 338-2000

ALEXANDER, LAWRENCE MELTON FP 053
555 CARTHAGE STREET A AC
SANFORD 27330 919 774-6518

ALEXANDER, LEON GEORGE, JR. TS /CDS 092
2800 BLUE RIDGE BLVD.,STE.306 A AC
RALEIGH 27607 919 782-7900

ALEXANDER, RICHARD LYNN EM 009
BLADEN COUNTY HOSPITAL AC
EMERGENCY DEPT.
ELIZABETHTOWN 28337 919 862-5133

ALEXANDER, WILLIAM MCKINLEY IM 045
P. O. BOX 627 L/RT
HENDERSONVILLE 28739 704 692-3463

ALFORD, JAMES DAVID GS /TS 049
427 E. STATESVILLE AVENUE A P AC
MOORESVILLE 28115 704 663-4065

ALFORD, PETER T. PUD /IM 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 FAX 919 748-4204

ALI, SHAMSHAD PD /NPM 059
1200 MEDICAL CTR. #B AC
MARION 28752 704 652-6386

ALKHALDI, AOUS SALIM R 039
104 TRANQUIL CIRCLE AC
OXFORD 27565 919 693-5115

ALLAN, JAMES THOMAS, JR. R 036
309 MAYWORTH WAY A AC
CRAMERTON 28032 704 824-7333

ALLBERT, JOHN RAYMOND 000
2801 JAMESTOWN WAY R
JACKSON, MS 39211 704 338-2000

ALLEN, BENJAMIN GRAY GS 084
PO BOX 1398 A AC
ALBEMARLE 28002 704 982-0161

ALLEN, CHARLES UPTON 034
2329 ROSEWOOD AVE. A * S
WINSTON-SALEM 27103 919 750-0260

ALLEN, CYRIL ANTHONY IM /HEM 092
P. O. BOX 14005 AC
RALEIGH 27620 919 828-3466

ALLEN, DAVID GEOFFREY ON /IM 063
PINEHURST MEDICAL CLINIC AC
205 PAGE RD.
PINEHURST 28374 919 295-5511
FAX 919 295-5171

ALLEN, DAVID HENRY CHP /P 034
1334 ASHLEY SQUARE AC
WINSTON-SALEM 27103 919 765-1866

ALLEN, ELIZABETH P 032
PO BOX 88 AC
ELIZABETHTON, TN 37643 615 542-6552

ALLEN, ELMS LEACH HEM /ON 034
3314 HEALY DR. STE. 107 A AC
WINSTON-SALEM 27103 919 768-2521
FAX 919 760-0845

ALLEN, FRED HUNTLEY, JR. N 060
1001 BLYTHE BLVD., STE. 601 AC
CHARLOTTE 28203 704 377-9323
FAX 704 358-9664

ALLEN, JAMES LATHAN OBG 032
209 E. CARVER ST. A AC
DURHAM 27704 919 471-2273

ALLEN, JOHN O. HENRY FP /IM 059
31 STATE ST. AC
PO BOX 1189
MARION 28752 704 652-5251

ALLEN, LEE F. 032
5519 WESCOTT PLACE R
DURHAM 27712 919 383-4409

ALLEN, LEROY NS 092
3009 NEW BERN AVE. A AC
PO BOX 14027
RALEIGH 27620 919 231-3320
FAX 919 832-1647

ALLEN, LOUIS DAVID PD 092
3124 BLUE RIDGE RD. #102 AC
RALEIGH 27612 919 782-0021

ALLEN, MOLLY VIRGINIA OPH 065
1120 MEDICAL CENTER DR. A AC
WILMINGTON 28401 919 763-7316

ALLEN, ROBERT LEE NS 092
3009 NEW BERN AVE. A AC
PO BOX 14027
RALEIGH 27620 919 832-4448

ALLEN, WILLIAM GILES IM /PUD 065
1515 DOCTOR'S CIR. AC
WILMINGTON 28401 919 343-0614

ALLEY, JAMES THOMPSON ALD 000
380 HOSPITAL DR., STE. 125 A AC
MACON, GA 31201 912 745-1575

ALLEYNE, GRANT LIVINGSTONE OBG 026
P. O. BOX 64838 A P AC
FAYETTEVILLE 28306 919 323-2767

ALLEYNE, KENNETH R. 034
1902 QUEEN ST., APT D-5 A S
WINSTON-SALEM 27103 919 723-6632

ALLF, BRYAN EWING OPH 032
3120 OXFORD DR. A R
DURHAM 27707

ALLGOOD, JOHN WILLIAM, JR. IM 041
1503 PEBBLE DR. A L/RT
GREENSBORO 27410 919 292-2196

ALLIGOOD, TOBY RAY D /IM 007
1110 HIGHLAND DRIVE AC
WASHINGTON 27889 919 946-4176

ALLISON, DAVID JAMES R 026
221 RIVENOAK DR. AC
FAYETTEVILLE 28303 919 323-2012

ALLISON, E. JACKSON, JR. EM 074
PROFESSOR & CHAIRMAN A AC
ECU, DEPT. OF EMERGENCY MED.
GREENVILLE 27858 919 551-4757
FAX 919 551-5014

ALMARIO, JOSELITO U 008
500 N. ACADEMY ST. AC
AHOSKIE 27910 919 332-6444

ALMEKINDERS, LOUIS C. ORS /SM 032
UNC, DIV. OF ORTHO. SURG. A AC
CB #7055
CHAPEL HILL 27599 919 966-2030

ALMIRALL, PETER DAVID FP /OM 010
OAK ISLAND MEDICAL CENTER AC
307 YAUPON DR.
YAUPON BEACH 28465 919 278-3316

ALMKUIST, RALPH DURWOOD, II NEP /IM 065
1302 MEDICAL CENTER DRIVE A P AC
WILMINGTON 28401 919 343-9800

ALMOND, CHARLES MALCOLM FP 065
1960 S. 16TH ST. AC
WILMINGTON 28401 919 343-9991
FAX 919 343-8448

ALMQUIST, PERRY F. PD 060
1700 ABBEY PLACE A AC
CHARLOTTE 28209 704 523-7232

ALPERT, ERIC DAVID R 060
CHARLOTTE RADIOLOGY AC
PO BOX 36937
CHARLOTTE 28236 704 365-0343

ALQAISI, MUNTHER E. RO 074
ECU SCHOOL OF MED. A AC
DEPT.OF RADIATION ONCOLOGY
GREENVILLE 27858 919 551-2900

ALSENTZER, ULRICH KARL PM 074
REGIONAL REHABILITATION CTR. A AC
P. O. BOX 6028
GREENVILLE 27834 919 551-4440
FAX 919 551-9158

ALSON, ROY LEE EM 034
300 S. HAWTHORNE RD. A * AC
BOWMAN GRAY,DEPT.OF EMERG.MED.
WINSTON-SALEM 27103 919 748-2193

ALSPAUGH, JAMES A., II 032
601 HIBBARD DR. #C A S
CHAPEL HILL 27514 919 933-5793

ALSTON, MICHAEL CURTIS FP 008
405 HOLLY HILL RD. AC
MURFREESBORO 27855 919 398-5167

ALSUP, ROBERT MARTIN OTO 034
175 CHARLOIS BLVD., STE. 101 A AC
WINSTON-SALEM 27103 919 768-3361

ALSUP, WILLIAM BYRN, JR. OTO 034
261 WESTVIEW DR. SW A L/RT
WINSTON-SALEM 27104 919 724-0487

ALTHEIMER, MICHAEL D. END /IM 041
1022 PROFESSIONAL VILLAGE A AC
GREENSBORO 27410 919 378-1074

ALTSHULLER, LILLIS FLATMAN PD 032
1301 FAYETTEVILLE ST. AC
DURHAM 27707 919 683-1316

ALVA, JUAN GE /IM 032
609 VICKERS AVENUE AC
DURHAM 27701 919 688-4748

ALVARADO, TERESA LOIS OBG 067
200 MEMORIAL DR. A AC
JACKSONVILLE 28546 919 353-2115

AMATO, MARY THERESA 032
822 LANCASTER ST. APT. #2 S
DURHAM 27701 919 286-4983

AMAYA, MARCELINO CHP /P 032
2928 FRIENDSHIP ROAD A AC
DURHAM 27705 919 575-7621

AMEEN, WILLIAM OTIS, JR. FP /EM 041
2310 BLUE RIDGE DR. A AC
GREENSBORO 27405 919 282-1164
FAX 919 454-3695

AMES, DAVID ANTHONY P 074
313 LONGMEADOW ROAD AC
GREENVILLE 27858 919 752-7151

AMES, RICHARD HAIGHT NS 041
2316 PRINCESS ANN ST. A L/RT
GREENSBORO 27408 919 288-0421

AMMAR, MOHAMED IBRAHIM OBG 031
P. O. BOX 468 A AC
KENANSVILLE 28349 919 296-1666

AMSELLEM, DAVID P 043
GOOD HOPE HOSPITAL A P AC
PO BOX 668, DENIM DR.
ERWIN 28339 919 897-6151

AMUNDSON, RUSSELL HENRY NS 029
100 HOSPITAL DR. A AC
LEXINGTON 27292 704 246-8083

ANAGNOST, JOHN WILLIAM ON /HEM 065
1515 DOCTORS CIRCLE A AC
WILMINGTON 28401 919 763-5182

ANAND, RAKESH TARLOK AN 054
LENOIR MEMORIAL HOSPITAL A AC
KINSTON 28501 919 522-7373

ANDERSEN, SUSAN HOLLAR PD 098
1700 S. TARBORO ST. A AC
WILSON 27893 919 399-2277

ANDERSON, DUDLEY BUIST ON /HEM 098
1700 S. TARBORO ST. A AC
WILSON 27893 919 399-2231
FAX 919 399-2295

ANDERSON, EDWARD EVERETT U 032
DUKE UNIVERSITY MEDICAL CTR. A AC
DURHAM 27710 919 684-3448

ANDERSON, J. ROBERT 034
2000-J FALCON WOOD COURT A * S
WINSTON-SALEM 27127 919 785-2667

ANDERSON, JACK D. PD 060
1350 S. KINGS DR. AC
CHARLOTTE 28207 704 342-8200
FAX 704 332-7020

ANDERSON, JAMES DICK OBG 060
1023 EDGEHILL ROAD, SOUTH A AC
CHARLOTTE 28207 704 373-1541

ANDERSON, JOHN B., JR. FP 039
1018 COLLEGE STREET AC
OXFORD 27565 919 693-3972

ANDERSON, KENT THOMAS IM 098
2112 W. NASH STREET A AC
WILSON 27893 919 237-6787

ANDERSON, LANDON BUTLER ORS 065
1222 MEDICAL CENTER DRIVE A AC
WILMINGTON 28401 919 763-2977
FAX 919 763-8804

ANDERSON, LARRY GLENN ORS 012
103 MEDICAL HEIGHTS DR. A P AC
MORGANTON 28655 704 437-6500

ANDERSON, LYNN BIVINS OBG 034
250 CHARLOIS BLVD. A AC
WINSTON-SALEM 27103 919 768-4730

ANDERSON, PAGE ALBERT WILLIS PDC 032
BOX 3218, DUKE MEDICAL CTR. AC
DURHAM 27710 919 681-2916

ANDERSON, RICHARD DAWSON R /NM 060
2520 SEDLEY ROAD A AC
CHARLOTTE 28211 704 379-5860

ANDERSON, ROBERT BENTLEY ORS 060
1001 BLYTHE BLVD.,#200 A AC
CHARLOTTE 28203 704 373-0544
FAX 704 347-5320

ANDERSON, ROBERT JOHN GS 065
1414 MEDICAL CENTER DR. A AC
WILMINGTON 28401 919 763-7363

ANDERSON, ROBERT LOUIS OBG 034
301 CENTRAL ROAD A AC
CLEMMONS 27012 919 760-0444

ANDERSON, ROGER FABIAN, JR. TR /ON 092
4420 LAKE BOONE TRAIL A AC
REX CANCER CENTER
RALEIGH 27607 919 783-3018

ANDERSON, RUPERT COTHAM GS 018
RT. #2, BOX 196 C
CONOVER 28613 704 322-8485

ANDERSON, STEPHEN GRIFFITH OBG 034
2927 LYNDHURST AVENUE A AC
WINSTON-SALEM 27103 919 765-9350
FAX 919 760-4255

ANDERSON, SUSAN MCLENDON 034
2000-J FALCON WOOD CT. A * S
WINSTON-SALEM 27127 919 785-2667

ANDERSON, WILLIAM BANKS, JR. OPH 032
DUKE UNIVERSITY EYE CENTER A * AC
DURHAM 27710 919 684-3771
FAX 919 684-2230

ANDRACCHIO, VINCENT CHARLES AN 064
3709 WESTRIDGE CIRCLE DR. AC
ROCKY MOUNT 27804 919 443-8038

ANDREW, RAYMOND HALL P 034
250 CHARLOIS BLVD. AC
WINSTON-SALEM 27103 919 768-4730

ANDREW, WALLACE F., JR. ORS /HS 092
3515 GLENWOOD AVE. A AC
PO BOX 10707
RALEIGH 27605 919 781-5600

ANDREWS, BOB BARCUS PTH 078
P. O. BOX 847 A AC
LUMBERTON 28359 919 671-5074

ANDREWS, D. SCOTT CDS /TS 060
301 HAWTHORNE LANE A AC
CHARLOTTE 28204 704 375-8413
FAX 704 332-4602

ANDREWS, ELLEN N /P 063
PO BOX 1749 A AC
PINEHURST 28374 919 295-6868

ANDREWS, LEON POLK IM 065
1902 DRUID LANE A RT
WILMINGTON 28403 919 343-0167

ANDREWS, PAUL STEPHEN OBG 032
2609 N. DUKE ST. STE. 204 A AC
DURHAM 27704 919 471-8402

ANDREWS, ROBERT JACKSON IM 065
5305 WRIGHTSVILLE AVENUE A AC
WILMINGTON 28403 919 791-2626

ANDREWS, ROBERT WILLIAM U 032
923 BROAD ST. A AC
DURHAM 27705 919 286-1297

ANDREWS, THOMAS J. P 045
1612 ASHEVILLE HWY, STE. 4 AC
HENDERSONVILLE 28739 704 697-2673

ANDRINGA, RICHARD CORNELL AN /PD 041
1816 PEMBROKE RD., STE. #2 AC
GREENSBORO 27408 919 272-3720

ANDRINOPOULOS, GEORGE C. OBG /NPM 060
2028 RANDOLPH RD. A AC
CHARLOTTE 28207 704 372-5800

ANDRUS, THOMAS ROSS, JR. D 092
4005 CITY OF OAKS WYND A AC
RALEIGH 27612 919 782-3782

ANGELILLO, JOHN CHARLES FPS 032
DUKE MEDICAL CENTER A AC
DIV. OF PLASTIC SURGERY
DURHAM 27710 919 684-2943

ANIXTER, WILLIAM L. P 011
PO BOX 1101 A AC
HIGHLAND HOSPITAL
ASHEVILLE 28802 704 254-3201

ANLYAN, WILLIAM GEORGE GS 032
2200 W. MAIN ST., STE. 1066 A AC
DURHAM 27705 919 684-3438
FAX 919 286-2623

ANSCHER, MITCHELL S. TR /IM 032
BOX 3085, DUMC A AC
DURHAM 27710 919 684-3742
FAX 919 684-3953

ANSTADT, MARK PETER GS 032
803 LEON ST. A R
DURHAM 27704 919 684-6012

ANTHONY, LUTHER LESLIE, JR. IM /CD 036
1896 REMOUNT ROAD A AC
GASTONIA 28054 704 867-0736

ANTLEY, RAY M. R 012
2201 S. STERLING ST. A AC
MORGANTON 28655 704 433-1235

ANTONACCI, DIANA JO P 074
DEPT. OF PSYCHIATRIC MED. * AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2663

ANTONY, JOSE KANDANATT CD /IM 042
306 BECKER DR. AC
PO BOX 1175
ROANOKE RAPIDS 27870 919 537-9268

ANYADIKE, CYRIL 034
1641-M NORTHWEST BLVD. A S
WINSTON-SALEM 27103 919 723-5205

APLINGTON, JAMES PAGE ORS 041
PO BOX 14580 A AC
315 W. WENDOVER AVE.
GREENSBORO 27415 919 275-0724
FAX 919 272-5178

APPEL, ROBERT ALBERT U 026
1786 METROMEDICAL DR. AC
FAYETTEVILLE 28304 919 485-8151

APPERT, ROBERT ALBERT ORS 098
1700 S. TARBORO STREET A AC
WILSON 27893 919 291-1300

APPLEGATE, ROBERT J. 034
320 STANAFORD RD. AC
WINSTON-SALEM 27104

APPLER, MARK LEE GE /IM 086
1006 OLD ROCKFORD ST. A P AC
MT. AIRY 27030 919 786-9088

AQUADRO, CHARLES FRASURE GP /OM 016
326 FRONT STREET AC
BEAUFORT 28516 919 728-5141

ARCHER, WILLIS PD 081
117 TRYON RD. AC
RUTHERFORDTON 28139 704 286-9049

ARCHIE, JOSEPH PATRICK, JR. VS 092
3020 NEW BERN AVE. #560 AC
RALEIGH 27610 919 833-8404

ARDANS, TAMARA MARIE 034
300 S. HAWTHORNE RD. S
SCHOOL BOX #450
WINSTON-SALEM 27103

ARENA, JAY MORRIS PD 032
DUKE HOSPITAL, BOX 3024 A L
DURHAM 27710 919 684-6138

ARENDALE, STEPHEN SYDNES DR /NM 011
STE. 301, 445 BILTMORE CENTER A AC
ASHEVILLE 28801 704 254-2371

ARENSMAN, TODD ALLEN 074
M-6 DOCTOR'S PARK APTS. S
GREENVILLE 27834 919 752-9029

AREY, JOHN VINCENT GYN 013
246 UNION ST. N. L/RT
CONCORD 28025 704 788-4151

ARGENTA, LOUIS C. PS 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4416

ARI, ABDULLAH NECIP OBG 055
300 LABANS LANE A AC
LINCOLNTON 28092 704 732-0777

ARIAIL, JERRY NOLAN D 011
390 S. FRENCH BROAD AVE. A AC
ASHEVILLE 28801 704 252-3576

ARKIN, ROY MARC GS 041
721 GREEN VALLEY RD. A AC
GREENSBORO 27408 919 275-2889

ARMISTEAD, HOWARD LACY,JR. FP /OM 065
2108 S. SEVENTEENTH STREET AC
WILMINGTON 28401 919 762-7776

ARMISTEAD, RAY BAXTER ORS 025
1315 S. GLENBURNIE RD. STE. 7 AC
NEW BERN 28562 919 633-3256
FAX 919 633-9345

ARMON, CARMEL N 065
311 S. LASALLE ST. APT. 15F A R
DURHAM 27705 919 684-8111

ARMSTRONG, BEVERLY WELLER OT 060
3034 HAMPTON RD. A L/RT
CHARLOTTE 28207 704 366-0954

ARMSTRONG, BRUCE GRIFFEY U 011
1 DOCTOR'S PARK A AC
ASHEVILLE 28801

ARNEY, GERALD WAYNE DR 036
1381 E. GARRISON BLVD. A AC
PO BOX 1495
GASTONIA 28053 704 864-4378
FAX 704 864-4606

ARNOLD, GORDON BRUCE IM 040
624 QUAKER LN., STE 213-B AC
HIGH POINT 27262 919 883-4132

ARNOLD, TERRY VINCENT IM 029
13 MEDICAL PARK DR. AC
LEXINGTON 27292 704 249-7051

ARONSON, PHILIP R. IM /CD 034
BOX 631 AC
BERMUDA RUN 27006 919 765-3471

ARONSON, RICHARD ADLER IM /DIA 041
510 N. ELAM AVE. A AC
GUILFORD MEDICAL ASSOCIATES
GREENSBORO 27403 919 299-5454

ARRENDELL, WANDA BERTEL PTH /FOP 074
102-F VICTORIA COURT R
GREENVILLE 27834 919 551-4495

ARRINGTON, JOHN HODGE, III PTH /DMP 041
1608 VALLEYMEDE AC
GREENSBORO 27410 919 379-4073

ARROWOOD, JOHN P., JR. 034
2326-C ARDMORE TERRACE S
WINSTON-SALEM 27103 919 724-7963

ARTHUR, BARTON STEVENSON 074
M-9 DOCTOR'S PARK APT. A S
GREENVILLE 27834 919 758-7862

ARTHUR, ROBERT KEY OBG 040
P. O. BOX 5128 AC
HIGH POINT 27262 919 887-3011

ARTIS, AVIS ADRIENA OBG 032
400-B CRUTCHFIELD A * AC
DURHAM 27705 919 471-1573

ARTIS, ISAAC AMOS, JR. IM 074
114 ROANOKE PLACE AC
P. O. BOX 7304
GREENVILLE 27834 919 756-6986

ASCHER, JOHN ALBERT P 032
3030 CORNWALLIS RD. A * AC
RESEARCH TRIANGLE PK 27709 919 248-3259

ASHBURN, PHILIP EUGENE IM /GE 092
3100 BLUE RIDGE RD. #300 P AC
RALEIGH 27612 919 781-7500

ASHLEY, GALE JACKSON FP 003
DOCTOR'S OFFICE BUILDING AC
SPARTA 28675 919 372-4644

ASKARY, NASSER AGHA OBG /END 077
PO BOX 1715 A AC
ROCKINGHAM 28379 919 997-3151

ASKEW, ANNE PRESTON PD 092
4016 BARRETT DR., STE. 101 A AC
RALEIGH 27609 919 781-2438

ASRAEL, GERSON U 060
1350 KINGS DRIVE AC
CHARLOTTE 28207 704 342-8000

ASSEVERO, MICHAEL LAWRENCE OBG /GYN 065
916 17TH ST. S AC
WILMINGTON 28401 919 762-3290

ASSIMOS, DEAN GEORGE U 034
BOWMAN GRAY SCH. OF MEDICINE A AC
WINSTON-SALEM 27103 919 748-4131
FAX 919 748-2747

ATASSI, INAD BADREDDIN NS 026
101 ROBESON ST. STE. 410 A AC
FAYETTEVILLE 28301 919 483-5050
FAX 919 483-5999

ATHAR, MOHAMMED A. FP 086
146 RENFRO ST. AC
MT. AIRY 27030

ATKINS, JAMES NORMAN ON /IM 096
203 COX BLVD. AC
GOLDSBORO 27534 919 734-9455

ATKINS, MARK RUSSELL 032
708 HUGO ST. A R
DURHAM 27704 919 684-3300

ATKINS, WILLIAM SHAFFER OPH 095
907 STATE FARM ROAD P AC
BOONE 28607 704 262-1554

ATKINSON, ALVAN WILLIAM TS 092
3400 EXECUTIVE DR. STE. 102 A AC
RALEIGH 27609 919 872-8080

ATKINSON, SAMUEL MARVIN, JR. OBG 074
DEPT. OF OB-GYN P * AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4669
FAX 919 551-5329

ATTEBERRY, LINDA ROSE 034
300 S. HAWTHORNE RD. BOX 185 A * S
WINSTON-SALEM 27103 919 723-5736

ATWATER, JOHN SPENCER, JR. A /PD 011
390 S. FRENCH BROAD AVE. A P AC
ASHEVILLE 28801 704 254-5366

AU, VICTOR K. PS 001
1214 VAUGHN RD., STE. B AC
BURLINGTON 27215 919 227-5440

AUL, CHRISTOPHER TAYLOR FP 026
4092 PROFESSIONAL DR. AC
HOPE MILLS 28348 919 424-0123

AUMAN, EDWIN LEWIS IM 040
624 QUAKER LANE, SUITE 210-A AC
HIGH POINT 27262 919 841-8822

AUMAN, GEORGE LOUIS PD 092
3900 BROWNING PLACE AC
RALEIGH 27609 919 787-0266

AURINGER, SAM THOMAS DR 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-2818

AUSTIN, FREDERICK DA COSTA,III IM /ID 007
615 E. 12TH STREET AC
WASHINGTON 27889 919 946-2101

AUSTIN, HENRY VANN RHU 063
PINEHURST MEDICAL CLINIC AC
205 PAGE RD.
PINEHURST 28374 919 295-5511

AUSTIN, ROBERT GRAY, JR. OPH 090
1410 FRANKLIN ST., EAST A AC
MONROE 28110 704 289-5455

AUSTIN, WALTER KENNETH, JR. CD /IM 060
1001 BLYTHE BLVD., STE. 300 A AC
CHARLOTTE 28203 704 373-0212

AUSTIN, WILLIAM ELLIOT GE /IM 034
1830 HAWTHORNE ROAD A AC
WINSTON-SALEM 27103 919 765-0463

AVERETT, LELAND STANLEY, JR. FP 040
204 BOULEVARD ST. AC
HIGH POINT 27262 919 882-1324

AVERY, FRANK WALTON PTH 092
RALEIGH COMMUNITY HOSP. A AC
PO BOX 28280
RALEIGH 27611 919 954-3118

AYCOCK, PERRY WILLIAM, JR. IM /GE 036
1896 REMOUNT ROAD A AC
GASTONIA 28054 704 867-0735

AYCOCK, WILLIAM GLENN FP 001
202 S. FIFTH STREET AC
MEBANE 27302 919 563-9341

AYERS, JAMES SALISBURY FP 082
113 FINCH ST. A L/RT
CLINTON 28328 919 592-2541

AYMOND, JAMES KIRK 032
BOX 3000, DUMC R
DURHAM 27710 919 684-4202

AZIZKHAN, RICHARD GEORGE PDS /GS 032
UNC, DEPT. OF SURGERY CB 7210 A AC
CHAPEL HILL 27599 919 966-4643

AZZATO, JOHN ANTHONY ORS 010
902 HOWE ST. AC
SOUTHPORT 28461 919 457-4789

BAAGIL, HASAN MOHAMAD FP 036
1315 E. GARRISON BOULEVARD AC
GASTONIA 28054 704 866-0101

BABB, JEFFREY DEAN 032
612 HILLSBOROUGH #7 S
CHAPEL HILL 27514 919 968-0490

BACH, PHILIP JOHN ORS 060
120 PROVIDENCE ROAD A AC
CHARLOTTE 28207 704 377-0351
FAX 704 373-0746

BACHL, FREDERICK JOSEPH PD 080
720 GROVE STREET AC
SALISBURY 28144 704 636-5576

BACON, DAVID SCOTT 032
244 13TH ST. NE #310 S
ATLANTA, GA 30309 404 892-5273

BADAWI, RAOUF FAHMY P 041
522 N. ELAM AVE., STE. 203 AC
GREENSBORO 27403 919 854-2391

BADEN, THOMAS JAMES D /IM 012
2203 S. STERLING ST. AC
MORGANTON 28655 704 438-4683

BAGGETT, HENRY CLIFFORD OTO 064
2420 PROFESSIONAL DR. * AC
P. O. BOX 7099
ROCKY MOUNT 27804 919 937-4100
FAX 919 937-0571

BAGGETT, JOHN ROBERT IM 025
702 NEWMAN ROAD AC
MCCARTHY SQUARE
NEW BERN 28560 919 633-5333

BAGGETT, JOSEPH WOODROW OBG 026
P. O. BOX 53514 L/RT
FAYETTEVILLE 28305 919 485-1837

BAGLEY, CARTER SNOW OTO /HNS 011
131 MCDOWELL STREET A AC
ASHEVILLE 28801 704 254-3517

BAGWELL, JOHNNY WAYNE FP 092
1005 VANDORA SPRINGS RD. AC
GARNER 27529 919 779-1440

BAHNSON, EDWARD REID IM /ADM 034
2725 WINDSOR ROAD A L/RT
WINSTON-SALEM 27104 919 768-7784

BAHRANI, KHOSROW H. P 034
3111 MAPLEWOOD AVE., STE. 101 AC
WINSTON-SALEM 27103 919 768-2162

BAHRANI, OTAROD 034
1221 PARTRIDGE LN. S
WINSTON-SALEM 27106 919 768-2768

BAILEY, CHASSE MARGOT 074
P-6 DOCTOR'S PARK APTS. * S
BEASLEY DR.
GREENVILLE 27834 919 830-9448

BAILEY, CLARENCE ALMON, JR. PD /AI 032
1824 HILLANDALE ROAD A AC
DURHAM 27705 919 286-2202

BAILEY, CLAUDE FLETCHER OBG 070
403 E. FEARING ST. A L/RT
ELIZABETH CITY 27909

BAILEY, GEORGE TILLMAN DR 064
212 OLD COLONY WAY AC
ROCKY MOUNT 27801 919 443-8083

BAILEY, HILDA HART PD 080
102 MOCKSVILLE AVENUE AC
SALISBURY 28144 704 633-3727

BAILEY, JOHN BENNETT PD 011
131 MCDOWELL STREET AC
ASHEVILLE 28801 704 254-4337

BAILEY, JOHN RICHARD OPH 078
205 W. 29TH STREET A AC
LUMBERTON 28358 919 738-4856

BAILEY, LLOYD W. OPH 064
109 FOY DRIVE * AC
ROCKY MOUNT 27804 919 443-5164

BAILEY, ROBERT WOODWARD FP 045
611 FIFTH AVE. WEST AC
HENDERSONVILLE 28739 704 697-1508

BAILEY, ROYCE K. CD 045
PO BOX 217 A AC
NAPLES 28760 704 684-1046

BAILEY, THOMAS DANIEL OPH 023
1413 N. LAFAYETTE ST. A C
SHELBY 28150 704 482-6767

BAIRD, HARRY HAYNES U 060
1012 KINGS DRIVE A L
CHARLOTTE 28283 704 334-6449

BAIRD, HAYNES WALLACE PTH /CLP 041
1200 N. ELM STREET A AC
GREENSBORO 27401 919 379-4074

BAIRD, JAMES HAMILTON OBG 001
1624 MEMORIAL DRIVE A AC
BURLINGTON 27215 919 226-7386

BAKER, ALFRED LECARPENTIER R 034
3155 MAPLEWOOD AVE. A C
WINSTON-SALEM 27103

BAKER, BERNIE BALLINGTON, SR. OBG 021
EDENTON OB-GYN CENTER,PA A AC
P. O. BOX 990
EDENTON 27932 919 782-7407

BAKER, CHRISTOPHER CAMERON GS /CC 032
UNC, CB 7210 A AC
215 BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-4389

BAKER, DAVID STANFORD, II HS /ORS 060
2600 E. 7TH ST. A AC
PO BOX 35228
CHARLOTTE 28235 704 372-9820

BAKER, EDGAR FP 045
510-A FLEMING STREET AC
HENDERSONVILLE 28739 704 693-9973

BAKER, HERBERT MARVIN FP 079
258 THE BOULEVARD ST. AC
EDEN 27288 919 627-1129

BAKER, HORACE MITCHELL,JR. GS 078
1901 N. ELM ST. L/RT
LUMBERTON 28358 919 738-8571

BAKER, JOAN MARGO OBG 054
105 AIRPORT RD. AC
KINSTON 28501 919 523-8383

BAKER, JOHN WOODWARD EM /IM 060
CAROLINAS MEDICAL CTR. A AC
P. O. BOX 32861
CHARLOTTE 28232 704 355-5225

BAKER, LENOX DIAL ORS 032
BOX 3706, DUMC A L/RT
DURHAM 27710 919 684-2628

BAKER, LINNY MARSHALL PD /A 013
40 ARDSLEY AVENUE, N.E. AC
CONCORD 28025 704 782-1918

BAKER, MARK EARLY DR 032
DUMC, BOX 3808 A AC
DURHAM 27710 919 681-2711
FAX 919 681-5636

BAKER, MARVIN I. R /NM 021
PO BOX 1047 A AC
EDENTON 27932 919 482-8446

BAKEWELL, WILLIAM ERNEST, JR. P 032
N. C. MEMORIAL HOSPITAL A AC
CHAPEL HILL 27599 919 966-4551

BAKRI, KAMAL MANUBHAI ON /IM 026
P. O. BOX 42935 A AC
FAYETTEVILLE 28309 919 323-6910

BALAJI, TALLURI U 086
708 S. SOUTH ST. AC
MOUNT AIRY 27030 919 786-5144

BALDWIN, BOYCE D., JR. EM 011
225 LAMBETH WALK C
FLETCHER 28732 704 255-4032

BALDWIN, MARIE P /PN 011
PO BOX 173 A L/RT
DUE WEST, SC 29639

BALES, DONALD WEESNER, JR. IM 064
PO BOX 7828 A AC
ROCKY MOUNT 27804 919 977-6746

BALL, FRANK JERVEY, JR. IM 083
601 LAUCHWOOD DR. A AC
LAURINBURG 28352 919 276-7727

BALL, JAMES DALE NM /R 034
DIV. OF NUCLEAR MEDICINE AC
WINSTON-SALEM 27103 919 748-3520

BALL, MARSHALL RAY DR 034
BOWMAN GRAY, DEPT. OF RAD. A AC
WINSTON-SALEM 27103 919 748-4435

BALLARD, HARRY HAMPTON GS /VS 025
701 NEWMAN RD. AC
NEW BERN 28562 919 633-2081

BALLEN, PATRICK LASELVE GS 041
1511 WESTOVER TERR., STE. 103 A AC
GREENSBORO 27408 919 378-1583

BALLENGER, CLARENCE EUGENE,III N 025
227 MEMORIAL DRIVE. A AC
JACKSONVILLE 28540 919 633-4551
FAX 919 633-9439

BALLENGER, CLAUDE NEWTON, JR. PD 084
PO BOX 1427 A RT
ALBEMARLE 28002 704 982-2133

BALLENTINE, KINCHEN WHITAKER R 026
486 WINDWOOD ON SKYE AC
FAYETTEVILLE 28305 919 323-2012

BALLENTYNE, KEITH AN /FP 060
2330 RED FOX TRAIL A AC
CHARLOTTE 28211 704 377-5772

BALLIN, ROBERT HANS ARTHUR AN 033
HERITAGE HOSPITAL A P AC
111 HOSPITAL DR.
TARBORO 27886 919 641-7700

BALOCH, MOHAMMAD HAROON FP 092
2800 BLUE RIDGE BLVD. STE. 402 AC
RALEIGH 27607 919 787-0486

BALSLEY, ROBERT EUGENE PD 079
825 CRESCENT DRIVE A L/RT
REIDSVILLE 27320 919 349-6335

BALTIMORE, CHAS. LITTLEBURG,JR OPH 007
211 N. MARKET STREET P AC
WASHINGTON 27889 919 946-2171

BANDY, LAWRENCE C. OBG /ON 096
102 HANDLEY PARK CT. A C
GOLDSBORO 27534 919 734-3344

BANKOV, ROBERT WILLIAM EM 023
PO BOX 2366 A AC
SHELBY 28150 704 482-7972

BANKS, JERRY B., II 074
2901-F CEDAR CREEK RD. S
GREENVILLE 27834 919 830-9240

BANKS, WILLIAM JEFFERY 034
1143 S. HAWTHORNE RD. R
WINSTON-SALEM 27103 919 748-4316

BARADA, FRANC A., JR. RHU /IM 032
2609 N. DUKE ST. A AC
DURHAM 27704 919 477-5179

BARADARAN, AMIR SOHEIL 034
191 GLENDARE DR. APT. #7 A S
WINSTON-SALEM 27104 919 294-9428

BARBE, ROBERT FRANCIS OPH 033
PO BOX 1029 H
BUIES CREEK 27506 919 823-2105

BARBEE, LEWIS ELISHA GP 041
4928 SYLVANGLADE ROAD A P AC
MCLEANSVILLE 27301 919 375-3434

BARBER, ALFRED JOSEPH IM /HEM 070
1134 N. ROAD STREET A AC
ELIZABETH CITY 27909 919 338-5183

BARBER, JOHN FRANCIS GYN 011
157 WINDSOR RD. A L/RT
ASHEVILLE 28804 704 253-7209

BARBORIAK, PETER N. 032
1504 EDGEVALE RD. R
DURHAM 27701 919 684-8111

BARCO, DANIEL H. FP 032
2020 W. MAIN ST. A AC
DURHAM 27705 919 286-3885

BARDELAS, JOSE ANTONIO, JR. A /PD 040
100 WESTWOOD AVE. A * AC
HIGH POINT 27262 919 883-1393

BARDEN, GRAHAM ARTHUR, III PD 025
707 PROFESSIONAL DR. AC
NEW BERN 28560 919 633-2900

BARDEN, GRAHAM ARTHUR, JR. PD 025
707 PROFESSIONAL DRIVE AC
NEW BERN 28560 919 633-2900

BAREFOOT, KAREN DIANE FP 026
4092 PROFESSIONAL DR. AC
HOPE MILLS 28348 919 424-0123

BAREFOOT, ROBERT ALLEN, JR. 000
RT. #2, BOX 42-A-1 R
HOLLY SPRINGS 27540

BAREFOOT, VERNA YOUNG PH 025
2504 OLD CHERRY POINT ROAD L/RT
NEW BERN 28560 919 637-5574

BAREFOOT, WILLIAM FREDERICK GS 024
P. O. BOX 573 A L/RT
WHITEVILLE 28472 919 642-3256

BARISH, CHARLES FRANKLIN GE /IM 092
3100 BLUE RIDGE RD., STE. 300 P AC
RALEIGH 27612 919 781-7500

BARKER, CAROLYN E. CULBRETH P 039
PO BOX 1541 A AC
OXFORD 27565 919 693-3003

BARKER, DAVID BERT U 023
1001 N. WASHINGTON ST. A * AC
SHELBY 28151 704 482-2011

BARKER, JULIAN GYN 041
721 GREEN VALLEY RD., STE. 201 A P AC
GREENSBORO 27408 919 378-1110

BARKER, MARSHALL JAY OBG 054
1100 HARDEE RD. #112 A AC
KINSTON 28501 919 527-7208

BARKER, ROGER WILLIAM OTO /HNS 049
707 BRYANT ST. A AC
STATESVILLE 28677 704 873-5224

BARKER, RUDY WATKINS OBG 032
2609 N. DUKE ST., STE. 204 A AC
DURHAM 27704 919 471-8402

BARKLEY, KARL LEE OBG 041
721 GREEN VALLEY RD.,SUITE 102 A AC
GREENSBORO 27408 919 273-2411

BARKLEY, KARL LEE, II FP 000
556 HAMILTON STATION R
COLUMBUS, GA 31909

BARNARD, DIANNE C. CD 065
1515 DOCTORS CIR. AC
WILMINGTON 28401 919 763-5182

BARNES, JAMES A., JR. 034
126-2 LEWISVILLE-CLEMMONS RD. A R
CLEMMONS 27012 919 766-0762

BARNES, MAJOR RUSSELL, JR. OBG /GP 067
200 MEMORIAL DR. A AC
JACKSONVILLE 28546 919 353-0759

BARNES, VICTOR RUSSELL 000
3609 NW 22ND PL. R
GAINESVILLE, FL 32605 904 395-0111

BARNETT, STEWART D. 074
217 E. WOODSTOCK DR. S
GREENVILLE 27834 919 752-6717

BARNHARDT, LUTHER ERNEST, JR. R /NM 011
900 MEDICAL CT., STE. A A AC
PO BOX 910
MARION 28752 704 652-4630

BARNHILL, LARRY JARRETT,JR. CHP /P 032
120 BONAPARTE DR. AC
HILLSBOROUGH 27278 919 966-4136

BARR, FALVY CARL, JR. PTH /FOP 082
404 BUTLER DRIVE AC
CLINTON 28328 919 592-8511

BARR, JOHN FINDLEY FP 080
CLEVELAND FAMILY PRACTICE AC
PO BOX 310
CLEVELAND 27013 704 278-4053

BARRETT, GEORGE CARLYLE R 060
6913 HUNTFIELD DR. * AC
CHARLOTTE 28270 704 365-2878

BARRETT, LINDA LUCILLE 074
1313 TREYBROOKE CIR. A * S
GREENVILLE 27834 919 752-4742

BARRETT, ROLLAND JOHN, II GYN /ON 034
300 S. HAWTHORNE RD. A P AC
WINSTON-SALEM 27103 919 748-2353

BARRICK, HARRY W., JR. FP 092
1900 HIGHLAND PL. A AC
RALEIGH 27607 919 733-3223

BARRIER, CHARLES HAROLD IM 074
1705 W. 6TH ST., BLDG. E AC
GREENVILLE 27834

BARRINGER, ARCHIBALD LIPE FP 013
BOX 278 A L/RT
MOUNT PLEASANT 28124 704 436-9151

BARRINGER, MICHAEL LYNN GS 023
904 MEADOWBROOK LANE A AC
SHELBY 28150 704 482-6359

BARRINGER, PHIL LOUIS GS 090
P. O. BOX 968 A L
MONROE 28110 704 283-2738

BARRINGER, ROBERT PHILLIPS IM 036
1896 REMOUNT ROAD A P AC
GASTONIA 28054 704 867-0730

BARRINGER, THAD JONES P 092
3900 BROWNING PL., STE. 201 A AC
RALEIGH 27609 919 787-7125

BARRINGER, THADDEUS JONES, JR. P 092
3900 BROWNING PL., STE. 201 A P AC
RALEIGH 27609 919 787-7125

BARRINGER, THOMAS AVERY,III FP 060
10724 PARK ROAD A AC
CHARLOTTE 28210 704 542-6577

BARRO, LEE DENNIS GP 036
119-B W. PENNSYLVANIA AVE. AC
BESSEMER CITY 28016 704 629-4186

BARRON, JERRY LYNN ORS 060
1001 BLYTHE BLVD. #200 AC
MILLER ORTHOAEDIC CLINIC
CHARLOTTE 28203 704 373-0544

BARRON, JOHN ISAAC FP 012
P. O. BOX 489 A L
MORGANTON 28655 704 437-5641

BARROW, ROY DOUGLAS 074
1612-A OAKLAWN AVE. R
GREENVILLE 27858 919 551-4633

BARRY, DAVID WALTER IM /ID 032
BURROUGHS WELLCOME CO. A * AC
3030 CORNWALLIS ROAD
RESEARCH TRIANGLE PK 27709 919 248-4534

BARRY, PAUL DOUGLAS DR /NM 041
#2 WALDRON COURT A AC
GREENSBORO 27408 919 288-9346

BARRY, WILLIAM FP /EM 026
121 ELLERSIE DR. AC
FAYETTEVILLE 28303 919 864-7416

BARTELL, GARY DENNIS P 078
207 W. 29TH STREET AC
LUMBERTON 28358 919 738-5261

BARTELS, GEORGE THOMAS FP /NTR 092
605 BENSON RD. AC
GARNER 27529 919 779-6330

BARTELT, CURTIS FREDERICK FP 060
6725 FAIRVIEW ROAD AC
CHARLOTTE 28210 704 365-0677

BARTHOLOMEW, CYNTHIA L. PD 060
7108 PINEVILLE-MATTHEWS RD. AC
CHARLOTTE 28226 704 542-1952

BARTLETT, EDWIN CLARY ORS /SM 074
622 MEDICAL DR. A AC
GREENVILLE 27834 919 752-4613

BARTLETT, STEPHEN RUSSELL GS 074
208 N. LONGMEADOW ROAD A L/RT
GREENVILLE 27834 919 752-3218

BARTON, FORBES MARSHALL, JR. GS 060
2501 HANDLEY PL. AC
CHARLOTTE 28226 704 375-3728

BARTON, JOHN HOMER, JR. IM 034
160 SARATOGA ST. A R
WINSTON-SALEM 27103 919 765-7946

BARWICK, WILLIAM JAMES PS /GS 032
BOX 3098, DUMC A AC
DURHAM 27710 919 684-3320

BASS, DAVID ALDEN ID /IM 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-4322

BASS, SPENCER PIPPEN, JR. PTH 064
P. O. BOX 605 L/RT
TARBORO 27886 919 823-3114

BASS, THOMAS RECTOR FP 051
P. O. BOX 849 A AC
CLAYTON 27520 919 553-7158

BASSETT, FRANK HOUSTON, III ORS 032
DUKE UNIV. MED. CTR. A AC
DURHAM 27710 919 684-4378
FAX 919 684-8280

BATCHELLER, EDGAR HADLEY, JR. GS /TS 067
P. O. BOX 1000 AC
JACKSONVILLE 28540 919 353-2194

BATE, DAVID SOULE, JR. FP 011
1812 HENDERSONVILLE RD. AC
ASHEVILLE 28803 704 684-0011

BATEMAN, WALLACE BRYSON, JR. EM 096
309 WALNUT CREEK DRIVE AC
GOLDSBORO 27534 919 778-6205

BATES, HAROLD BASCOM U 001
1610 VAUGHN ROAD A AC
BURLINGTON 27215 919 227-2761

BATES, MICHAEL D. 032
BOX 3287, DUMC A S
DURHAM 27710 919 489-1586

BATES, PAUL KENNETH, JR. PD 018
240 18TH STREET CIRCLE, SE AC
HICKORY 28602 704 322-2550

BATTEN, HUBERT ELMORE R 026
2121 RAEFORD RD. AC
FAYETTEVILLE 28305 919 323-2012

BATTEN, WOODROW IM 051
601-B N. EIGHTH STREET A AC
SMITHFIELD 27577 919 934-8977

BATTISTONE, MICHAEL J. IM /CD 032
886 LOUISE CIR. APT. 26F S
DURHAM 27705 919 383-2199

BATTLE, CONSTANCE Y. OBG 092
3714 BENSON DR. AC
RALEIGH 27609 919 781-5550

BATTLE, MARGARET E. WHITE GYN 064
521 PEACHTREE STREET A L
ROCKY MOUNT 27801 919 442-2414

BATTS, JAYNE JOHNSON EM 060
8255 LEGARE CT. R
CHARLOTTE 28210 704 556-1388

BAUCOM, MARY PADGETT IM 060
PO BOX 32861 A AC
CHARLOTTE 28232 704 355-3165

BAUER, JOHN MONTGOMERY PTH 018
ROUTE #2, BOX 197 A AC
CONOVER 28613 704 322-3821

BAUGHAM, LEONARD ANDREW GS 097
P. O. BOX 1146 AC
NORTH WILKESBORO 28659 919 667-4718

BAUMAN, LOREN A. AN /PD 034
300 S. HAWTHORNE RD. C
WINSTON-SALEM 27103 919 948-4294

BAUMGARTEN, ALAN S. FP 011
206 ASHELAND AVE. AC
ASHEVILLE 28801 704 258-8681

BAUMRUCKER, JOHN FREDERICK FP 056
P. O. BOX 1060 AC
HIGHLANDS 28741 704 526-2125

BAXLEY, MARY JOHN IM /PD 041
1008 PROFESSIONAL VILLAGE * AC
GREENSBORO 27401 919 272-2119

BAZEMORE, WEBSTER CARLYLE, JR. IM/PUD 011
30 CHOCTAW ST. A AC
ASHEVILLE 28801 704 255-7733

BEACH, LAURIE JEANNE AN 013
920 CHURCH ST. N. A AC
CONCORD 28025 704 786-2111

BEAL, DOUGLAS WAYNE PD 025
ECU DEPT. OF COMMUNITY PED. A AC
PO BOX 1390
NEW BERN 28560 919 633-4496
FAX 919 633-6443

BEALS, MARTIN FEARING, JR. PD 070
1142 N. ROAD ST. AC
ELIZABETH CITY 27909 919 338-2155

BEAMER, MARK EDWARD 074
119 FLETCHER PL. S
GREENVILLE 27834 919 758-2290

BEAN, GARY OWEN FP 092
1109 DRESSER COURT AC
RALEIGH 27609 919 872-4900

BEAN, VIRGIL EDWARD AN 065
3225 SHADOW CT. AC
WILMINGTON 28403 919 343-7000

BEAR, SIGMOND AARON GYN 065
3712-B RESTON COURT L/RT
WILMINGTON 28403 919 799-3103

BEARD, ELDON S. FP 034
3640-A WESTGATE CENTER CIR. AC
WINSTON-SALEM 27103 919 768-6682

BEARD, JOHN NICHOLS OM /PD 060
1350 KINGS DRIVE AC
CHARLOTTE 28207 704 372-8750

BEARDSLEY, THOMAS LEWIS OPH 011
495 BILTMORE AVE. AC
ASHEVILLE 28801 704 258-1586
FAX 704 258-1765

BEARER, ELIZABETH ANN 032
7J RIVER BIRCH ROAD A R
DURHAM 27705 919 684-8111

BEASLEY, CHARLES BRITTON OTO 054
KINSTON CLINIC, NORTH AC
KINSTON 28501 919 523-0687

BEASLEY, CHARLES RONALD IM /PUD 078
206 W. 27TH STREET A * AC
LUMBERTON 28358 919 738-1421

BEASLEY, MICHAEL EDWARD PS 060
2215 RANDOLPH RD. A AC
CHARLOTTE 28207 704 372-6846
FAX 704 342-0752

BEASON, EDWARD STEWART PS 034
1732 S. HAWTHORNE ROAD A * AC
WINSTON-SALEM 27103 919 765-3540

BEATTIE, KATHRYN I. D. 032
1250 EPHESUS CHURCH RD.,APT H5 S
CHAPEL HILL 27514

BEAUCHEMIN, RICHARD R., JR. OPH 050
201 ASHEVILLE HWY.,STE. 103 A P AC
SYLVA 28779 704 586-7462
FAX 704 586-3312

BEAVER, ROBERT HOWELL ORS 013
109 COUNTRY CLUB DR. A AC
CONCORD 28025 704 786-5122

BEAVER, WALTER BURNS, JR. ORS 060
1001 BLYTHE BLVD., #200 A AC
CHARLOTTE 28203 704 373-0544

BEAVERS, CHARLES LEE AN 041
100 MEADOWBROOK TERRACE A L/RT
GREENSBORO 27408 919 273-1066

BEAVERS, CLARENCE HENRY FP 079
520 S. VAN BUREN RD A C
EDEN 27288 919 623-5171

BEAVERS, JAMES WALLACE GP 041
2206 W. MARKET ST. A L/RT
GREENSBORO 27403 919 272-3487

BECAN, ARTHUR FRANK ORS 034
PO BOX 686 A P AC
OUTPATIENT CENTER
KING 27021 919 983-9617

BECERRA, FRANCISCO IM 031
ROSE HILL MEDICAL CLINIC AC
ROSE HILL 28458 919 289-3030

BECHTOLDT, ALBERT ARTHUR, JR. AN 032
UNC, DEPT. OF ANES. A AC
CHAPEL HILL 27599 919 966-5136

BECK, J. MONTGOMERY FP /U 001
4045 FOREST OAKS LN. A L/RT
MEBANE 27302 919 563-2450

BECKER, BRYAN NEIL 032
BOX 31130, DUMC R
DURHAM 27710 919 684-8111

BECKER, DENIS I. END /IM 092
3410 EXECUTIVE DR., SUITE 205 A * AC
RALEIGH 27609 919 876-7692

BECKHAM, DAVID ROBERTSON AN 026
1762 METROMEDICAL DR. A * AC
FAYETTEVILLE 28302 919 323-5491

BECKNELL, GEORGE FRANKLIN, JR. GP 081
407 S. BROADWAY A AC
FOREST CITY 28043 704 245-4838

BECKWITH, GEORGE HUGHES CD /IM 025
PO BOX 2554 AC
702 NEWMAN RD. MCCARTHY SQ.
NEW BERN 28560 919 633-5333

BECKWITH, MARY KRISTINE OBG 032
209 E. CARVER ST. A AC
DURHAM 27704 919 471-2273

BEDRICK, JAMES JOSEPH OPH 060
2015 RANDOLPH RD. AC
CHARLOTTE 28207 704 334-2020

BEEMER, CHARLES T. ORS 053
PO BOX 1169 A AC
1816 DOCTORS' DR.
SANFORD 27330 919 775-7232
FAX 919 774-7922

BEISCHEL, JEAN MARIE PD 078
103 W. 27TH ST. AC
LUMBERTON 28358 919 739-3318

BELK, ROBERT SAMUEL IM /CD 014
322 MULBERRY ST. SW AC
PO BOX 1020
LENOIR 28645 704 758-5544

BELL, CAROL ROLAND AN 011
202 DOCTOR'S BUILDING A AC
ASHEVILLE 28801 704 254-1969

BELL, DOROTHY MCFARLAND OPH 032
1110 W. MAIN ST. AC
DURHAM 27701 919 682-9341

BELL, EDWIN LILLINGTON IM /PUD 025
702 NEWMAN RD. AC
PO BOX 2554
NEW BERN 28560 919 633-5333

BELL, ELIZABETH ANNE 032
423 WHITEHEAD CIRCLE S
CHAPEL HILL 27514 919 942-6137

BELL, IRA EUGENE, JR. TR /R 018
508 6TH ST., NW L/RT
HICKORY 28601 704 322-0856

BELL, JOHN DAVIS AN 045
401 SIXTH AVE., WEST AC
HENDERSONVILLE 28739 704 693-9669

BELL, JOSEPH TYRON PD 078
103 W. 27TH ST. AC
LUMBERTON 28358 919 739-3318

BELL, MICHAEL JOHN R /NM 060
2001 VAIL AVENUE A AC
CHARLOTTE 28207 704 379-5860

BELL, RALPH MONROE IM 060
8223 BONDS GROVE CHURCH RD. A L/RT
WAXHAW 28173 704 377-6569

BELL, WILLIAM HARRISON, JR. R /NM 025
P. O. BOX 2065 A AC
NEW BERN 28560 919 633-5057

BELL, WILLIAM HARRISON,III VS /TS 025
800 HOSPITAL DR. SUITE 10 A AC
NEW BERN 28560 919 638-8118

BELL, WILLIAM OSGOOD NS 034
BOWMAN GRAY, DEPT. OF NS A AC
WINSTON-SALEM 27103 919 748-4047

BELL, WILLIS HARVEY, II IM /PUD 032
2027 WAWA AVENUE A RT
DURHAM 27707 919 493-1048

BELLAMY, WILLIAM EDWARD, JR. IM /PUD 092
3101 ESSEX CIRCLE P AC
RALEIGH 27608 919 782-2631

BENBOW, EDWARD PERRY, JR. PD 041
PO BOX 339 A L
ORIENTAL 28571 919 299-7057

BENBOW, JOHN MILLER PD 013
40 ARDSLEY AVENUE, N.E. AC
CONCORD 28025 704 786-1144

BENDER, NEIL CARMICHAEL IM 025
P. O. BOX 68 A AC
POLLOCKSVILLE 28573 919 633-1010
FAX 919 224-3071

BENEDUM, JOHN LOYLE IM 060
1350 S. KINGS DR. AC
CHARLOTTE 28207 704 364-7037

BENFIELD, RONALD WM. ORS /HS 049
520 BROOKDALE DR. AC
STATESVILLE 28677 704 872-7492

BENJAMIN, EUGENE E. N 060
1718 E. 4TH ST., #702 A AC
CHARLOTTE 28204 704 334-6085
FAX 704 334-0711

BENJAMIN, SANFORD PHILIP PTH /CLP 060
2001 VAIL AVE. A AC
CHARLOTTE 28207 704 379-5982

BENNETT, CRAIG RANDALL ORS 097
408 8TH ST. DOCTOR'S BLDG. A AC
PO BOX 788
NORTH WILKESBORO 28659 919 667-5039

BENNETT, HERRON KENT OBG 040
P. O. BOX 5128 AC
HIGH POINT 27262 919 887-3011

BENNETT, JERRY L. PD 034
2240 CLOVERDALE AVENUE AC
SUITE 217, PROF. BLDG.
WINSTON-SALEM 27103 919 722-7143

BENNETT, JOHN DIETER 032
611 SNOWCREST TRAIL A R
DURHAM 27707 919 684-8111

BENNETT, JOHN JOE GP /OM 025
102 GIBBS ROAD AC
NEW BERN 28560 919 633-0709

BENNETT, JOHN MARK 011
491 BILTMORE AVE AC
ASHEVILLE 28801

BENNETT, JOHN NORTHWOOD R 097
ROUTE #1, BOX 96 A AC
MORAVIAN FALLS 28654 919 838-3896

BENNETT, LAWRENCE NORTHWOOD DR 097
PO BOX 609 A AC
N. WILKESBORO 28659 919 651-8400

BENNETT, PAUL CLIFFORD, JR. FP 096
2400 WAYNE MEM. DR., STE. B AC
GOLDSBORO 27530 919 735-1251

BENNETT, WILLIAM TYSON CD /IM 060
3626 LATROBE DR. A * AC
CHARLOTTE 28211 704 364-0057
FAX 704 362-1611

BENSEN, VLADIMIR BASIL FP /GS 092
422 ST.MARY'S STREET A L
RALEIGH 27605 919 832-6855

BENSON, JOHN DEWITT PTH 092
4420 LAKE BOONE TRAIL A AC
RALEIGH 27607 919 783-3040

BENSON, JOHN FISHER RHU /IM 040
318 WESTWOOD AVENUE AC
HIGH POINT 27262 919 882-2515

BENSON, NICHOLAS HEROD EM 074
109 DUKE RD. A AC
WINTERVILLE 28590 919 551-2954

BENSON, TERRY LEE FP 060
1618 E. MOREHEAD ST. AC
CHARLOTTE 28207 704 563-1290

BENTIVOGLIO, GIAN P. 034
13 HIGHLAND AVE. S
WEST LEBANON, NH 03784

BENTLEY, RALPH LUTHER PD 049
PO BOX 1460 A AC
STATESVILLE 28677 704 878-2011

BENTSEN, BIRGER STEVEN P 064
1701 SUNSET DR., STE. 200 AC
ROCKY MOUNT 27804 919 972-4302

BENTSON, EDWARD KEITH IM 045
559 N. JUSTICE ST. A AC
HENDERSONVILLE 28739 704 696-8166

BENTZEL, CARL JOHAN IM /NEP 074
DEPT. OF RENAL MED. AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2545

BERGANT, JAMES ALLEN U 032
2609 N. DUKE ST., SUITE 302 A AC
DURHAM 27704 919 471-8423

BERGER, BRUCE R. FPY /CHP 074
105 FAIRLANE RD. A AC
GREENVILLE 27834 919 355-8777

BERGER, FREDERICK ALLEN PD 056
28 RIVERVIEW STREET, #114 AC
FRANKLIN 28734 704 524-8474

BERGER, GARY STERLING OBG /PH 032
109 CONNER DR., STE. 2104 A AC
CHAPEL HILL 27514 919 968-4656

BERGIN, DONALD J. OPH 041
3312 BATTLEGROUND AVE. A AC
GREENSBORO 27410 919 282-5000
FAX 919 282-5022

BERGLUND, LAURA H. 032
5605 HIDEAWAY DR. R
CHAPEL HILL 27516 919 379-3900

BERKELEY, SCOTT BRUCE, JR. GS 096
2400 WAYNE MEM. DR. STE. E A AC
GOLDSBORO 27530 919 735-6021

BERKEY, WILLIAM SALDERUS, JR FP 011
PO BOX 696 AC
SKYLAND 28776 704 684-7801

BERKOWITZ, GERALD PHILLIP NPM /PD 060
200 HAWTHORNE LANE A * AC
P. O. BOX 33549
CHARLOTTE 28233 704 384-4944

BERMAN, JEFFREY MICHAEL AN 049
300 S. HAWTHORNE RD. A AC
DEPT. OF ANESTHESIA

BERMAN, LISA ANNE 034
2358 CLOVERDALE AVE., APT. D S
WINSTON-SALEM 27103 919 724-3942

BERNARDO, DANILO REYES NEP /IM 042
PO BOX 220 AC
ROANOKE RAPIDS 27870 919 535-2111

BERNE, FREEMAN ALBERT DR 078
P. O. DRAWER 1527 A P AC
LUMBERTON 28358 919 738-8222

BERNER, THOMAS EM 011
22 WILLOW RD. AC
ASHEVILLE 28804 704 274-3592

BERNHARDT, PETER F. PTH 032
3549 MAYFAIR ST., APT. 101 A R
DURHAM 27707 919 493-2132

BERNING, LENORA WONG EM 000
1439 JODHPUR CT. R
CHARLOTTE 28212 704 355-3181

BERNSTEIN, DANIEL OPH 091
1924 RUIN CREEK RD. STE. 204 A P * AC
HENDERSON 27536 919 492-8021

BERNSTEIN, JERRY CHARLES PD /PDA 092
4905 PROFESSIONAL COURT AC
RALEIGH 27609 919 872-0250

BERNSTEIN, ROSLYN JULIE IM /NEP 032
704 SLEEPY CREEK DR. A R
DURHAM 27713 919 684-8111

BERRY, FRANCIS XAVIER OBG 041
1208 COLONIAL AVE. L/RT
GREENSBORO 27408 919 272-2155

BERRY, JOHN, JR. GS 054
PO BOX 1316, DOCTOR'S DR. A AC
KINSTON 28501 919 522-1626

BERRY, WILLIAM ROSSER ON /HEM 092
PO BOX 30098 A AC
RALEIGH HEM/ONCOLOGY CLI.
RALEIGH 27622 919 781-7070
FAX 919 571-9352

BERRYHILL, BRUCE HOLT OTO 060
1600 E. THIRD STREET A AC
CHARLOTTE 28204 704 372-3300

BERSIN, ROBERT MERLE IM /CD 060
1001 BLYTHE BLVD., STE. 300 AC
CHARLOTTE 28203 704 373-1503

BERTICS, GREGORY M. N 092
3821 MERTON DR. A AC
RALEIGH 27609 919 782-3456

BERTRAM, ROBERT U 080
909 W. HENDERSON ST. A AC
SALISBURY 28144 704 633-9441

BERTRAND, MARGARET LINS DR 041
3607 HENDERSON RD. A * AC
GREENSBORO 27410 919 379-0941

BERTRAND, SCOTT ALAN AN 041
PO BOX 10373 A P AC
GREENSBORO 27404 919 373-0372

BESHAI, AMIR ZAHER 032
3611 UNIVERSITY DR. 14-S R
DURHAM 27707 919 684-8111

BEST, ANDREW ARTHUR FP 074
P. O. BOX 949 L
GREENVILLE 27834 919 752-2129

BEST, DAVID CHARLES PS /HS 041
600 PASTEUR DR. A AC
GREENSBORO 27403 919 852-0300

BEST, JAMES ERNEST PD /ADL 041
600 PASTEUR DRIVE A L/RT
GREENSBORO 27403 919 854-9023

BEST, RANDALL MARK EM 092
2004 LODESTAR DR. A AC
RALEIGH 27615 919 733-6220

BETHEL, MILLARD BAIMBRIDGE PH 092
400 AVINGER LANE-409 A L/RT
DAVIDSON 28036 704 896-1409

BETTS, CHARLES SAMUEL IM 076
220-A FOUST STREET A AC
ASHEBORO 27203 919 629-7710

BETTS, WILMER CONRAD P /ALD 092
920-A PAVERSTONE DR. A P * AC
RALEIGH 27615 919 847-2624

BEUTEL, WILLIAM DEAN GS 055
PO BOX 811 AC
LINCOLNTON 28093 704 732-1108

BEVIN, ABNER GRISWOLD, JR PS /GS 032
UNC, DIV. OF PLASTIC SURG. A AC
CB #7195
CHAPEL HILL 27599 919 966-4446

BEVIS, CHARLES ALAN ORS 049
1835 DAVIE AVE., STE. 415 AC
STATESVILLE 28677 704 872-7676

BEY, RICHARD DOUD N 034
160 CHARLOIS BOULEVARD A AC
WINSTON-SALEM 27103 919 768-5834

BEYER, ALFRED JAMES GS 026
521 BEAUMONT ROAD AC
FAYETTEVILLE 28304 919 483-5031

BEYER, CATHERINE HERLIHY PD 026
1213 WALTER REED ROAD AC
FAYETTEVILLE 28305

BEYTAS, EROL MARTIN NM /R 032
BOX 3808, DUMC A C
DURHAM 27710 919 660-2711

BHAGWANDASS, SHEILA SODHI PD 042
PO BOX 66 A AC
ROANOKE RAPIDS 27870 919 537-6465

BHOTIWIHOK, PREECHA AN 054
P. O. BOX 1043 A * AC
KINSTON 28503 919 522-7800

BIANCHI, EDGARDO HUGO CD /IM 067
1703 COUNTRY CLUB RD. STE. 202 A AC
JACKSONVILLE 28540 919 455-9600

BIBBY, CHARLES K., JR. 032
5125 WINDING BROOK RD. S
CHARLOTTE 28226

BICKET, DAPHNE PATRICIA FP 097
RT. #1, BOX 312-A C
FERGUSON 28624 919 973-8682

BICKLEY, SAMUEL TAYLOR FP 040
P. O. BOX 5168 * AC
HIGH POINT 27262 919 885-2118

BIERMAN, DAVID RALPH P /CHP 092
6031 RAMBLING HILL DR. A C
MORRISVILLE 27560 919 571-7744

BIESECKER, GARY LEROY GS 040
624 QUAKER LN., STE. C-101 AC
HIGH POINT 27262 919 883-1348

BIGGERS, DAVID CARL PTH 011
MEMORIAL MISSION HOSPITAL A * AC
ASHEVILLE 28801 704 255-4270
FAX 704 255-4215

BIGGERS, WILLIAM PAUL OTO /A 032
610 BURNETT-WOMACK CB 7070 * AC
UNC SCHOOL OF MEDICINE
CHAPEL HILL 27599 919 966-3341
FAX 919 966-7656

BIGHAM, ROY STINSON, JR. IM 060
4000 MCKEE RD. A L/RT
CHARLOTTE 28270 704 846-2233

BILBREY, GEORGE MARVIN, JR CDS /TS 011
257 MCDOWELL STREET A P AC
ASHEVILLE 28803 704 258-1121

BILBRO, ROBERT HODGES IM /CD 092
3521 HAWORTH DR. A AC
RALEIGH 27609 919 782-1806
FAX 919 782-4756

BILLICA, WILLIAM HARRY FP 032
BOX 2914, DUMC,ERWIN SQUARE C
DEPT. OF COMM. AND FAMILY MED.
DURHAM 27710 919 548-9618

BILLINGS, JACK SMITH FP 034
540 HOLMES DRIVE A AC
RURAL HALL 27045 919 969-9158

BINDER, GEORGE ARTHUR DR 026
401 LAKESHORE DR. AC
FAYETTEVILLE 28305 919 484-4028

BINION, GERALD RAY OBG 023
110 W. GROVER STREET A AC
SHELBY 28150 704 487-5258

BIRMINGHAM, LORRAINE FAITH FP 032
10817 TRAPPERS CREEK DR. AC
RALEIGH 27614 919 870-7633

BISHOP, JOHN MASON, JR. GYN 007
118 N. HAUGHTON ST. C
WILLIAMSTON 27892 919 781-7450

BISHOPRIC, ALICE OBG 018
1205 N. CENTER STREET AC
HICKORY 28601 704 328-2901

BISSELL, LEWIS F. IM 011
12 ROUND OAK ROAD AC
ASHEVILLE 28804 704 254-0663

BISSRAM, GANESH ORS 042
130 CARDINAL DR. AC
ROANOKE RAPIDS 27870 919 535-3091

BITTER, KARL FFOLLIOTT U 011
1 DOCTOR'S PARK A AC
ASHEVILLE 28801 704 253-5314

BITTINGER, ISABEL ORS 034
118 S. CHERRY ST., A L
PO BOX 10668
WINSTON-SALEM 27108 919 725-0656

BLACK, BILLY GENE OBG /AN 060
2711 RANDOLPH RD. #309 AC
CHARLOTTE 28207 704 342-0982
FAX 704 342-4088

BLACK, EDWARD BARNWELL R 060
CHARLOTTE RADIOLOGY A AC
PO BOX 36937
CHARLOTTE NC 28236 704 365-0343

BLACK, JAMES FRANKLIN OBG 029
200 CAROLINA AVE. A AC
LEXINGTON 27292 704 243-2431

BLACK, JAMES HAMPTON IM /NEP 060
125 BALDWIN AVE. A * AC
CHARLOTTE 28204 704 374-1696

BLACK, JOHN ALEXANDER R 065
102 TRAIL IN THE PINES ST. A AC
WILMINGTON 28409 919 343-7000

BLACK, KYLE E., JR. ORS 040
624 QUAKER LN., STE. D-200 P AC
HIGH POINT 27262 919 841-6262

BLACK, KYLE EMERSON GS 080
ONE ACORN LANE A L
SALISBURY 28144 704 636-5510

BLACK, MARTIN L. DR 045
PARDEE HOSPITAL AC
HENDERSONVILLE 28739 704 696-1040

BLACK, PAUL ADRIAN L. OALR/OPH 065
5553 OLEANDER DRIVE A L
WILMINGTON NC 28403 919 799-2226

BLACKBURN, KATHERINE S. 034
1601 TRINITY GARDEN CIR. R
CLEMMONS 27012 919 765-5952

BLACKBURN, THOMAS REID DR 023
PO BOX 1148 A AC
SHELBY 28150 704 487-3141

BLACKERBY, JAMES GP 025
1807 TRYON ROAD A L/RT
NEW BERN 28560 919 637-3424

BLACKERBY, JAMES NICHOLAS GS 025
701 NEWMAN RD. AC
NEW BERN 28562 919 633-2081

BLACKLEY, DONALD WAYNE AN 060
2001 VAIL AVENUE C
CHARLOTTE 28207 704 379-5000

BLACKLEY, ROY JACKSON P /GPM 092
4907 QUAIL HOLLOW DR. * L/RT
RALEIGH 27609 919 733-4506

BLACKLEY, SHEM K., III U 023
1001 N. WASHINGTON ST. A AC
SHELBY 28150 704 482-2011

BLACKMAN, JESSE AYCOCK GP 096
109 S. SYCAMORE STREET AC
FREMONT 27830 919 242-6171

BLACKMON, BRUCE BERNARD FP 043
P. O. BOX 8 A * AC
BUIES CREEK 27506 919 893-3543

BLACKWELL, OSCAR MOORE, III IM /BE 029
309 PINEYWOOD ROAD A AC
THOMASVILLE 27360 919 475-8121

BLACKWELL, SAMUEL DWIGHT 092
2431 CONDOR CT. C
RALEIGH 27615 919 471-4921

BLAINE, DAVID ALLAN 034
715 S. HAWTHORNE RD. A S
WINSTON-SALEM 27103 919 722-8519

BLAIR, JAMES SEABORN FP 070
PO BOX 629 A R
HATTERAS 27943 919 986-2352

BLAIR, JAMES SEABORN, JR. FP 031
400 E. MAIN STREET A AC
WALLACE 28466 919 285-2134

BLAIR, JERRY RAY OPH 032
673 LINDLEY RD. S
GLENSIDE, PA 19038 215 887-8250

BLAIR, ROBERT GILLESPIE, JR. ORS 025
P. O. DRAWER 1694 A AC
TRIANGLE PLAZA
NEW BERN 28560 919 633-4477

BLAKE, GERALD WAYNE IM /ID 092
3521 HAWORTH DR. AC
RALEIGH 27609 919 782-1806

BLAKE, JOHN PAUL P 001
723 EDITH STREET A AC
BURLINGTON 27215 919 227-9818

BLAKE, ROBERT ADAMS ORS 036
902-D COX ROAD AC
GASTONIA 28054 704 864-6723

BLAKELY, GENE THORNTON EM 045
MARGARET PARDEE HOSPITAL AC
HENDERSONVILLE 28739 704 693-6522

BLAKEMORE, WILLIAM STEPHEN OPH 021
101 MARK DR. P AC
EDENTON 27932 919 482-7471

BLALOCK, FLOYD ESTON, JR. FP /GP 020
VALLEY RIVER CLINIC AC
ANDREWS 28901 704 321-4510

BLANCHAT, TIMOTHY JOSEPH IM 018
11 13TH AVENUE, N. E. A AC
HICKORY 28601 704 322-3541

BLAND, RALPH WINGATE GS /TS 096
2400 WAYNE MEM.DR.,STE.J A P AC
GOLDSBORO 27530 919 734-5010

BLAND, VEITA JOYCE FP 041
1021 E. WENDOVER AVE. STE. 202 * AC
MEDICAL ARTS BLDG.
GREENSBORO 27405 919 373-1557

BLANK, JONATHAN WILLIAM AN 032
5500 BURLING CT. R
NC MEMORIAL HOSP.
BETHESDA, MD 20817 301 295-3140

BLANK, ROY CRARY IM 060
335 N. CASWELL RD. A AC
CHARLOTTE 28204 704 376-4852
FAX 704 376-5012

BLAYLOCK, RUSSELL LANE NS 040
P. O. BOX 5388 A AC
HIGH POINT 27262 919 889-3242

BLAZEK, F. DOUGLAS GS /ABS 040
624 QUAKER LN., STE. C-101 AC
HIGH POINT 27262 919 883-1348

BLEDSOE, MARY C. 034
BOWMAN GRAY SCH.OF MED.BOX 121 S
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 724-9754

BLEDSOE, MARY M. 032
805 W. MAIN ST. #A S
CARRBORO 27510 919 968-1822

BLIEVERNICHT, STEPHEN WALDO GS 041
1014 PROFESSIONAL VILLAGE P AC
GREENSBORO 27401 919 373-1078

BLINN, LAWRENCE ALLAN R 011
PO BOX 2959 AC
103 DOCTORS BLDG.
ASHEVILLE 28802 704 254-4517

BLOCH, EDMOND CECIL AN /PD 032
BOX 3094, DUMC AC
DURHAM 27710 919 681-5737

BLODGETT, GEO. S., III OPH 056
DOCTORS BLDG., STE. 110 A AC
FRANKLIN 28734 704 524-7333

BLOMELEY, CHARLES PERRY FP 075
PO BOX 608 AC
COLUMBUS 28722 704 894-8213

BLOMGREN, PETER FREDERICK FP 041
317 W. WENDOVER AVE. AC
GREENSBORO 27408 919 373-1794

BLOMQUIST, GUSTAV ARTHUR, JR. NS 041
1021 E. WENDOVER AVE.,STE. 103 A AC
GREENSBORO 27405 919 275-1111

BLOOM, MITCHELL JAY PM 041
1200 N. ELM ST. A AC
GREENSBORO 27401 919 379-3667

BLOOMFIELD, ROBERT LEE IM 034
651 BRENTWOOD CT. A RT
WINSTON-SALEM 27101 919 727-8165

BLOUNT, CHARLES WHITNER, JR. FP 060
6708 ALBEMARLE ROAD AC
CHARLOTTE 28212 704 536-4903

BLOUNT, FREDERICK ALEXANDER PD 034
2390 COLISEUM DRIVE A L/RT
WINSTON-SALEM 27106 919 724-3072

BLOUNT, JOHN MYERS, III FP /OM 080
130 WOODSON ST. AC
SALISBURY 28144 704 637-3207

BLOW, OSBERT PTH 032
5238 N. WILLOWHAVEN DR. A R
DURHAM 27712 919 383-1076

BLOWE, RALPH BOYD, SR. FP 042
10 WEST 6TH STREET A L
WELDON 27890 919 536-3820

BLUE, DANIEL WILLIAM AN 067
ONSLOW MEM. HOSPITAL AC
DEPT. OF ANES
JACKSONVILLE 28540 919 462-2011

BLUE, JOHN FREDERICK FP 053
P. O. BOX 820 * AC
SANFORD 27330 919 775-7522

BLUE, JOHN FREDERICK, JR. FP 026
4092 PROFESSIONAL DR. AC
HOPE MILLS 28348 919 424-0123

BLUM, JEFFREY CLARK DR /IM 013
651 CHURCH ST., NORTH A AC
CONCORD 28025 704 786-0214

BLYTHE, WILLIAM BREVARD IM /NEP 032
UNC, DEPT. OF MEDICINE AC
CHAPEL HILL 27599 919 966-2565

BOARD, ROBERT JEFFREY OPH 092
3320 EXECUTIVE DR. STE. 111 AC
RALEIGH 27609 919 876-2427

BOAT, THOMAS FREDERICK PD /PUD 032
2025 S. LAKESHORE DRIVE AC
CHAPEL HILL 27514 919 966-4427

BOATRIGHT, JAMES RICHARD HS /ORS 060
1001 BLYTHE BLVD., STE. 200 A AC
CHARLOTTE 28203 704 373-0544
FAX 704 347-5320

BOBBITT, JAMES DANIEL OPH 013
33 LAKE CONCORD ROAD, N.E. AC
CONCORD 28025 704 786-2015
FAX 704 788-3993

BOBZIEN, WILLIAM FREDRICK, III HEM /IM 064
100 NASH MEDICAL ARTS MALL AC
ROCKY MOUNT 27801 919 443-9084

BODE, DONALD DENBY, JR. OPH 074
2573 STANTONSBURG RD. A AC
GREENVILLE 27834 919 752-0313

BODNER, WILLIAM RAYMOND, JR. P 041
606 WALTER REED DR. A AC
GREENSBORO 27403 919 299-0107

BOEHM, O. ROBERT A /IM 060
1718 EAST FOURTH ST., STE. 703 AC
CHARLOTTE 28204 704 332-7731

BOERNER, DAVID FRANKLIN IM /PUD 092
3100 BLUE RIDGE RD.STE. 300 P AC
RALEIGH 27612 919 781-7500

BOERNER, ROBERT MARTIN ID /PUD 011
520 BILTMORE AVENUE A AC
ASHEVILLE 28801 704 254-5932

BOETTE,RICHARD WALTERS PD 041
515 COLLEGE RD., STE. 11 AC
GREENSBORO 27410 919 852-9630

BOGARD, ANN QUINN OTO 034
1901 S.HAWTHORNE RD.,STE. 240 A AC
WINSTON-SALEM 27103 919 768-1308

BOGARD, PHYLLIS JEANETTE * 074
1440 TREYBROOKE CIRCLE A R
GREENVILLE 27834 919 551-5912

BOGARD, TERRENCE DALE AN 034
5020 KNOB VIEW TRAIL A P AC
WINSTON-SALEM 27104 919 760-3954

BOGEY, WILLIAM M., JR. GS /VS 074
DEPT. OF VASCULAR SURGERY A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4667

BOGGS, LAWRENCE KENNEDY U 060
1012 KINGS DRIVE AC
CHARLOTTE 28283 704 333-3825

BOHNSACK, MICHAEL ROBERT AN 098
1803 WILDWOOD CT. A AC
WILSON 27893 919 291-1700

BOKA, BERNARD GEORGE 034
250-B GLENDARE DR A S
WINSTON-SALEM 27104 919 768-1219

BOKESCH, CHARLES RICHARD IM /CD 086
P. O. BOX 1547 AC
MOUNT AIRY 27030 919 786-6146

BOLDING, WILLIAM ROBERT AN 092
2032 THORPSHIRE DR. A AC
RALEIGH 27609 919 755-8000

BOLEN, LOUIS ROBERT 034
2353 QUEEN ST., #D S
WINSTON-SALEM 27103 919 765-9467

BOLES, MARK LEONARD 032
201 WESTBROOK DR., APT. D-20 A S
CARRBORO 27510 919 929-3251

BOLICK, DEBBIE A. 032
RT. #9, BOX 4 A R
LYSTRA HILLS
CHAPEL HILL 27514 919 966-2127

BOLIN, LEWIS BRYANT, JR. FP 036
603 COX RD. AC
GASTONIA 28054 704 865-2386

BOLLING, THOMAS VANCE GS 075
208 HOSPITAL DR. AC
COLUMBUS 28722 704 894-3566

BOLLINGER, RALPH RANDAL GS /IG 032
BOX 2910, DUKE HOSPITAL A AC
DURHAM 27710 919 684-5209
FAX 919 684-8716

BOLON, CHARLES GORDON GYN 060
RR 10, BOX 865 L/RT
MOORESVILLE 28115 704 333-4104

BOLSTAD, KARL EDWARD ORS 029
14 MEDICAL PARK DR. A AC
LEXINGTON 27292 704 249-2978

BOLZ, EVERETT ARTHUR OTO 060
3535 RANDOLPH RD., STE. 210 * AC
CHARLOTTE 28211 704 365-0711

BOMBATEPE, VAMIK FP 096
204 N. HERMAN STREET AC
GOLDSBORO 27530 919 735-7580

BOMBENGER, JAMES JOHN EM /PUD 023
ROUTE #3, BOX 774-B AC
CONNELLY SPRINGS 28612 704 397-6147

BOMBERG, ROBERT BRYAN IM 032
JOHN UMSTEAD HOSPITAL AC
MEDICAL SERVICE UNIT
BUTNER 27504 919 575-7211

BOND, EDWARD GRIFFITH IM /CD 021
CHOWAN MEDICAL CENTER L/RT
PO BOX B
EDENTON 27932 919 482-2116

BOND, JOHN LAWRENCE, JR. GS /ORS 097
P. O. BOX 1128 A P AC
N. WILKESBORO 28659 919 838-4789

BOND, JOHN PENNINGTON GS 036
1806 FAIRFIELD DRIVE A L/RT
GASTONIA 28054 704 865-0154

BOND, THOMAS MADISON GE /IM 011
49 MCDOWELL ST. A P AC
ASHEVILLE 28801 704 258-3870

BONDURANT, STUART IM 032
CB 7000, 125 MACNIDER BLDG. AC
UNC-CH SCHOOL OF MEDICINE
CHAPEL HILL 27599 919 966-4161

BONNER, JACK WILBUR,III P 011
BOX 1101, HIGHLAND HOSPITAL A P AC
ASHEVILLE 28802 704 254-3201
FAX 704 258-8095

BONNER, MERLE DUMONT PUD /A 041
3504 FLINT ST., APT. D-121 A L/RT
GREENSBORO 27405 919 288-4460

BONNER, STEVEN PAUL FP 060
211 S. SHARON AMITY RD. A AC
CHARLOTTE 28211 704 366-7586

BONNIN, IRVIN RAYMOND OBG 036
1225 E. GARRISON BLVD. AC
GASTONIA 28054 704 867-7226

BOOKER, JOHN PARKS, JR. DR 018
P. O. BOX 308 A AC
HICKORY 28603 704 322-2644

BOOLS, JOHN C. DR /NM 018
18 13TH AVE. NE A * AC
PO BOX 308
HICKORY 28603 704 322-2871

BOONE, EDWARD EVERETT IM 018
ROUTE #2, BOX 199 AC
CONOVER 28613 704 322-1128

BOONE, JOHN WOODIE, JR. FP 042
120 PROFESSIONAL DRIVE AC
ROANOKE RAPIDS 27870 919 537-9176

BOONE, STEPHEN CHRISTOPHER NS /EM 092
3009 NEW BERN AVE. A AC
PO BOX 14027
RALEIGH 27620 919 832-4448

BORCHERT, LYNN GORDON GYN 074
PO BOX 160 AC
STOKES 27884 919 752-0973

BOSKEN, DONALD WILLIAM FP 029
1120 RANDOLPH RD., STE. 16 * AC
THOMASVILLE 27360 919 475-7163

BOSSE, HELEN HALL AN 092
1419 SPRINGMOOR CIR. A L/RT
RALEIGH 27615 919 779-0777

BOSSEN, EDWARD HECHT PTH 032
BOX 3712, DUMC A AC
DURHAM 27710 919 684-3300

BOST, WILLIAM STUART, JR. OTO 074
8 DOCTOR'S PARK A AC
PO BOX 5007
GREENVILLE 27834 919 752-5227

BOSTIC, WILLIAM CHIVOUS, III ORS 034
SALEM ORTHOPAEDIC ASSOC. PA A AC
PO BOX 25007
WINSTON-SALEM 27114 919 768-1270

BOSWELL, JOHN IVERSON, JR. CHP /P 032
UNC, DEPT. OF PSYCHIATRY AC
WING C, RM. 237, CB #7160
CHAPEL HILL 27599 919 966-3379

BOTERO, ERNESTO MIGUEL NS 041
200 E. NORTHWOOD ST., STE. 312 AC
GREENSBORO 27401 919 272-4578

BOTROS, SHERIF BOTROS OTO 065
1625 DOCTOR'S CIRCLE A AC
WILMINGTON 28401 919 762-0234

BOUNOUS, CHRISTINE G. IM 025
BOX 68 AC
POLLOCKSVILLE 28573 919 633-1010

BOUNOUS, EDWIN P., JR. IM 025
BOX 68 A AC
POLLOCKSVILLE 28573 919 224-4591

BOUNOUS, JUDITH FRANCES EM /PD 070
2082 RIVERSHORE ROAD AC
ELIZABETH CITY 27909 919 335-1003

BOURGEOIS, JOHN ELLIOTT OPH 060
1600 E. THIRD ST. AC
CHARLOTTE 28204 704 372-3300

BOUZIGARD, RAY JOSEPH R /DR 054
KINSTON CLINIC, NORTH A AC
DOCTORS DRIVE
KINSTON 28501 919 527-7077
FAX 919 527-0565

BOWEN, BENJAMIN CURETON FP 049
RT. #9, BOX 183-H AC
STATESVILLE 28677 704 878-6592

BOWEN, EDWYN TAYLOR, JR PD 034
3001 MAPLEWOOD AVENUE AC
WINSTON-SALEM 27103 919 765-9170

BOWEN, J. HARTLEY, III PTH 012
208 CAMELOT DRIVE AC
MORGANTON 28655 704 438-2254

BOWEN, JAMES WILLIAM AN 064
3709 WESTRIDGE CIRCLE DR. C
ROCKY MOUNT 27801 991 443-2125

BOWEN, JANET WILDER FP 092
117 ESCHER LANE C
CARY 27511 919 323-1152

BOWEN, JOHN HENRY FP /GP 014
912 CONNELLY SPRINGS ROAD AC
P. O. BOX 1014
LENOIR 28645 704 728-8224

BOWEN, MICHAEL LYNN FP 098
PO BOX 3185 A AC
WILSON 27895 919 237-2891

BOWEN, SAMUEL T. IM 060
PO BOX 490 A AC
DAVIDSON 28036 704 892-5076

BOWER, EDWARD BIRCH GS 090
900-A E. SUNSET DR. A AC
MONROE 28112 704 289-2561

BOWER, STEPHEN LEE DR 034
3155 MAPLEWOOD AVENUE A AC
WINSTON-SALEM 27103 919 760-5874

BOWERS, SCOTT P. OPH 098
#5 SILVER LAKE VILLAS A * AC
WILSON 27893 919 291-1300

BOWES, WATSON ALLEN, JR. OBG 032
DEPT. OF OBG AC
CB #7570,MACNIDER BLDG.,UNC
CHAPEL HILL 27599 919 966-1601

BOWLES, FRANCIS NORMAN OBG 032
1019 FISH CROW ROAD A L/RT
SANIBEL, FL 33957 813 472-4436

BOWLES, RICHARD MORGAN PD 023
101 GROVER STREET A AC
SHELBY 28150 704 482-1435

BOWLING, RICHARD FRANKLIN GS 023
P. O. BOX 638 A AC
SHELBY 28150 704 487-8591

BOWMAN, CHRIS R. OBG 000
1182 SHIPYARD BLVD. R
WILMINGTON 28712 919 799-0199

BOWMAN, JAMES FREDERICK ORS /SM 074
604 MEDICAL DR. A P AC
GREENVILLE 27834 919 758-1777
FAX 919 758-7484

BOWMAN, MARJORIE ANN FP /GPM 034
300 S. HAWTHORNE RD. A * AC
DEPT. OF FAMILY MEDICINE
WINSTON-SALEM 27103 919 748-3724
FAX 919 748-4204

BOWMAN, MICHAEL HIGGINS N 092
3821 MERTON DR. A AC
RALEIGH 27609 919 782-3456

BOWMAN, WILLIAM EDMUND, JR. GS /VS 041
1317 N. ELM ST., STE. #5 A AC
GREENSBORO 27401 919 274-8444
FAX 919 274-5367

BOWMAN, WILLIAM KELLY 074
104-15 CHESTERFIELD CT. A S
GREENVILLE 27834 919 355-1122

BOWMAN, ZEBULON LYNN OPH /IM 097
110 CEDAR LANE A AC
N. WILKESBORO 28659 919 838-9119

BOWTON, DAVID LOWELL PUD /CC 034
DEPT. OF MEDICINE AC
BOWMAN GRAY SCH. OF MEDICINE
WINSTON-SALEM 27103 919 748-4332

BOWYER, ALLEN FRANK CD 074
2000 VENTURE TOWER DR.,STE.300 A AC
GREENVILLE 27834 919 551-4651

BOX, PATRICK RHU /IM 060
2310 RANDOLPH ROAD A P AC
CHARLOTTE 28207 704 376-2707

BOYCE, OREN DOUGLAS IM /HYP 036
328 HUFFMAN RD. A L
GASTONIA 28054 704 865-1653

BOYCE, STEPHEN EUGENE OTO 092
3010 ANDERSON DR. AC
RALEIGH 27619 919 787-7171

BOYCE, WILLIAM HENRY U 034
RT. #2, BOX 150 A L/RT
STUART, VA 24171

BOYD, BASIL MANLY, JR. ORS 060
1001 BLYTHE BLVD., #200 A AC
CHARLOTTE 28203 704 373-0544

BOYD, DALE WOODS R 025
300 AUGUSTA CT. P AC
NEW BERN 28562 919 633-1010

BOYD, DEBORAH DAETWYLER GS /VS 098
1704 S. TARBORO ST. A AC
WILSON 27893 919 291-7001

BOYD, ELLEN PD 000
GREENWOOD GENETIC CENTER R
1 GREGOR MENDEL CIRCLE
GREENWOOD, SC 29646 803 223-9411

BOYD, JAMES FRANCIS ON /HEM 060
2015 RANDOLPH RD. #210 AC
CHARLOTTE 28207 704 358-1900
FAX 704 358-1932

BOYD, JOSEPH ALSTON, JR. R 091
1909 PARKER LANE A L/RT
HENDERSON 27536 919 438-4645

BOYD, RICHARD ARMISTEAD OBG 049
STATESVILLE MEDICAL GROUP AC
PO BOX 1821
STATESVILLE 28677 704 878-2011

BOYER, GEORGE NORMAN P 075
913 CAROLINA DRIVE L
TRYON 28782 704 859-5439

BOYETTE, CHARLES OTIS FP 007
P. O. BOX 310 A P * AC
BELHAVEN 27810 919 943-2651

BOYETTE, DEANNA MARIE 032
424 BROOKSIDE DR. R
CHAPEL HILL 27514 919 684-8111

BOYETTE, DOUGLAS DEWITT OBG 064
200 NASH MEDICAL ARTS MALL A AC
ROCKY MOUNT 27804 919 443-5941
FAX 919 443-7059

BOYETTE, DOUGLAS RAY CD /IM 023
808 SCHENCK STREET A AC
SHELBY 28150 704 482-1482

BOYETTE, EDWARD LEE FP /CD 031
A * L
CHINQUAPIN 28521 919 285-3481

BOYETTE, GRAY THOMAS IM /GE 034
2933 MAPLEWOOD AVENUE AC
WINSTON-SALEM 27103 919 765-1640

BOYLES, LARRY WAYNE N /IM 018
MEDICAL SPECIALITIES BLDG. A AC
415 N. CENTER ST., STE. 202
HICKORY 28601 704 327-9869

BOYLES, WAYNE FRANCIS FP 018
ROUTE #3, BOX 155 A AC
HICKORY 28602 704 327-4745

BOYLSTON, JAMES ALAN PTH 060
701 COLVILLE RD. A AC
CHARLOTTE 28207 704 371-4814

BOZYMSKI, EUGENE MICHAEL GE /IM 032
UNC,DEPT. MED., CB #7080 * AC
324 BURNETT-WOMACK BLDG
CHAPEL HILL 27599 919 966-2511

BRAASCH, ERNEST R. P /PYA 032
4114 DEEPWOOD CIRCLE AC
DURHAM 27707 919 493-2217

BRAASCH, LESLEY KRIEGMAN PYA /P 032
4114 DEEPWOOD CIRCLE AC
DURHAM 27707 919 493-2217

BRABHAM, FELICIA B. IM 045
518 SIXTH AVE. WEST AC
HENDERSONVILLE 28739 704 697-7805

BRABSON, JOHN ANDERSON GS /GYN 060
1030 N. EDGEHILL RD. #308 A L
CHARLOTTE 28207 704 333-0611

BRACEY, VICTOR A. 032
109 TWISTED OAK PL. S
DURHAM 27705 919 490-1969

BRACKBILL, THOMAS ANDREW CD /CD 041
1011 PROFESSIONAL VILLAGE A AC
GREENSBORO 27401 919 272-6133
FAX 919 271-9043

BRADFORD, ARTHUR LOUIS FP 078
123 E. BROAD STREET AC
ST. PAULS 28384 919 865-5170

BRADFORD, EDWARD AYERS IM 060
7920 ALEXANDER RD. A AC
CHARLOTTE 28270 704 365-0760

BRADFORD, JAMES HEDRICK CD /IM 049
738-A BRYANT ST. AC
STATESVILLE 28677 704 873-1189

BRADFORD, WILLIAM STRONG GS 079
PO BOX 150 AC
REIDSVILLE 27323 919 349-4024

BRADFORD, WILLIAMSON Z., JR. OBG 060
150 PROVIDENCE ROAD A AC
CHARLOTTE 28207 704 377-0461

BRADLEY, BETTY BRUTON FP 009
P. O. BOX 998 * AC
BLADENBORO 28320 919 863-3138

BRADLEY, DON WAYNE FP 032
PO BOX 30004 AC
BLUE CROSS/BLUE SHIELD OF NC
DURHAM 27702 919 490-4003

BRADLEY, GEORGE LEE, JR. GP /AM 036
800 E. FIRST STREET P AC
CHERRYVILLE 28021 704 435-4111

BRADLEY, HAROLD JOHN, JR. U 041
200 E. NORTHWOOD ST. A AC
GREENSBORO 27401 919 378-9176

BRADLEY, TERESA KELLER 074
WEDGEWOOD ARMS APTS. 304 A S
GREENVILLE 27834 919 756-2534

BRADSHAW, PETER H. GS /VS 018
415 N. CENTER ST., STE. 102 A AC
HICKORY 28601 704 327-9178

BRADSHAW, PRESTON HATCHER, JR. U 092
1200 KERSHAW DR. AC
RALEIGH 27609 919 783-6687

BRADSHER, JAMES DONALD GP 073
P. O. BOX 168 L/RT
ROXBORO 27573 919 599-1611

BRADY, JOSEPH LAWRENCE, JR. PD /NPM 060
PO BOX 33549 A AC
CHARLOTTE 28233 704 384-4944

BRADY, WALTER MORRIS FP 016
#5 MEDICAL PARK A AC
MOREHEAD CITY 28557 919 726-8414

BRAME, ROBERT GRIFFIN OBG 074
DEPT. OF OB-GYN * AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-5200
FAX 919 551-5229

BRAMLEY, MICHAEL LAIRD PD 074
300 BETHESDA DR. AC
GREENVILLE 27834 919 752-7141

BRAMMER, THOMAS DALTON FP 092
1005 VANDORA SPRINGS RD. AC
GARNER 27529 919 779-1440

BRANAMAN, GUY HEWITT, JR. GYN 092
915 WILLIAMSON DR. A L/RT
RALEIGH 27608 919 833-4080

BRANCH, CHARLES LEON, JR. NS 034
300 S. HAWTHORNE RD. A * AC
BOWMAN GRAY,SECT.NEUROSURGERY
WINSTON-SALEM 27103 919 748-4083

BRANCH, JAMES DAVID OPH 034
224 TOWN RUN LANE A AC
WINSTON-SALEM 27101 919 723-0748

BRANDON, DANIEL EM 036
3028 MT. VERNON DRIVE A AC
GASTONIA 28056 704 827-0253

BRANDON, HENRY ALLEN, JR. IM /EM 095
RT. #4, BOX L30-B A P AC
BOONE 28607 704 264-3308

BRANDSPIGEL, KARL NEP /IM 070
104 W. COLONIAL AVE. AC
ELIZABETH CITY 27909 919 335-1083

BRANHAM, HENRY EZELL, JR. P /HYP 034
1409 PLAZA WEST RD., STE. E AC
WINSTON-SALEM 27103 919 768-9393

BRANNAN, WILLIAM CHESTER OBG 011
143 ASHELAND AVENUE A AC
ASHEVILLE 28801 704 258-9191

BRANNER, WILLIAM A., III OPH 060
4335 COLWICK RD AC
CHARLOTTE 28211 704 364-7400

BRANNON, SUSAN ANN PD 011
131 MCDOWELL ST. AC
ASHEVILLE 28801 704 254-4337

BRANTLEY, BERT ALTON, JR. ON 032
307 COLONY WOODS DRIVE AC
CHAPEL HILL 27514 919 684-3695

BRANTLEY, INGRID JEAN CHP /P 032
3510 UNIVERSITY DRIVE AC
DURHAM 27707 919 489-1884

BRANTLEY, JEFFREY GARLAND P 032
1109 HUNTSMAN DR. AC
DURHAM 27713 919 682-9296

BRANTLEY, JULIAN CHISOLM, JR. GYN 064
1507 LAFAYETTE AVE. A L/RT
ROCKY MOUNT 27801 919 446-8434

BRANTLEY, JULIAN CHISOLM,III OBG 007
701 SHOREWOOD DRIVE A AC
WASHINGTON 27889 919 946-6544

BRANTLEY, JULIAN THWEATT OBG 041
6-C FOUNTAINVIEW CIR. A L/RT
GREENSBORO 27405 919 272-9840

BRANYON, DAVID WATTERSON CHP /P 018
PO BOX 9149 AC
HICKORY 28603 704 327-7888

BRASHEAR, HARRY ROBERT, JR. ORS 032
N. C. MEMORIAL HOSPITAL L/RT
CHAPEL HILL 27599 919 966-2030

BRASHEAR, RALPH GUY FP 092
P. O. BOX 827 AC
WENDELL 27591 919 365-7366

BRASHER, BRUCE UMBERTO IM 034
250 CHARLOIS BLVD A AC
WINSTON-SALEM 27103 919 260-4750

BRASWELL, WILLIAM KELLEY GS /TS 044
MIDWAY MEDICAL CENTER AC
P. O. BOX 1409
CANTON 28716 704 627-2211

BRATTON, TERESA SUE PDA /AI 041
1021 E. WENDOVER, STE. 302 AC
GREENSBORO 27405 919 275-1318

BRAUN, SIMON DAVID DR 011
4 HOLMWOOD RD. AC
PO BOX 2959
ASHEVILLE 28801 704 254-4617

BRAWLEY, BOBBY WATSON NS 060
1010 EDGEHILL RD, NORTH A P AC
CHARLOTTE 28207 704 376-1605

BRAXTON, DORIS BLACKWELL PD /ADL 001
711 HERMITAGE ROAD AC
BURLINGTON 27215 919 229-5341

BRAY, ANTHONY D. 032
1729-D E. CORNWALLIS RD. A S
DURHAM 27713 919 544-6903

BRAZIL, WILBURN OSCAR, JR. U 011
100 VICTORIA ROAD A AC
ASHEVILLE 28801 704 254-8883

BREAM, CHARLES ANTHONY DR 032
N. C. MEMORIAL HOSPITAL L
CHAPEL HILL 27599 919 966-1461

BRECHTELSBAUER, P. BRADLEY 032
#6 HOLLAND DR. A * S
CHAPEL HILL 27514 919 968-1961

BREEDEN, THOMAS E. GYN 036
1391-C GARRISON BLVD. AC
GASTONIA 28054 704 867-3551

BREMER, CHARLES CHRISTOPHER FP 074
DEPT. OF FAMILY MED. 4N78 A * AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2601

BRENCKMAN, WAYNE D., JR. ON /IM 032
GLAXO, INC. A AC
5 MOORE DR.
RESEARCH TRIANGLE PK 27709 919 941-4259

BRENIZER, ADDISON GORGAS, JR. GS /TS 060
1333 QUEENS RD. #101 A L/RT
CHARLOTTE 28207 704 376-4942

BRENNAN, MICHAEL W. OPH 001
1214 VAUGHN RD. * AC
BURLINGTON 27215 919 228-0254

BRENNER, WILLIAM EDWARD OBG /NPM 032
101 CONNER DR. STE. 402 AC
CHAPEL HILL 27514 919 942-0011

BRENTON, BRADLEY CLARK DR 096
2700 MEDICAL OFFICE PLACE AC
GOLDSBORO 27530 919 734-1866

BRESLIN, MARIANNE S. P /PYM 032
1704 MICHAUX ROAD A L/RT
CHAPEL HILL 27514 919 493-2657

BRESTEL, ERIC PAUL A /IM 074
DEPT. OF MEDICINE AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2562

BRETT, CHARLES BURDEN PD 041
1307 W. WENDOVER AVENUE AC
GREENSBORO 27408 919 272-5189

BREWER, JAMES CHESTER, JR. FP 041
P. O. BOX 8248 A AC
GREENSBORO 27419 919 852-7618

BREWER, THOMAS E., JR. EM /GP 040
2807 EARHLAM PLACE A C
HIGH POINT 27263 919 724-9455

BREWINGTON, THOMAS ELMER, JR. OPH 041
P. O. BOX 20346 AC
GREENSBORO 27420 919 272-5628

BREWSTER, VANN ALLEN OM /GP 060
5308 HILLINGDON RD.
CHARLOTTE 28226 704 542-7584

BREZINA, DAWN S. IM 074
1612 TREYBROOKE CIR. R
GREENVILLE 27834 919 757-2961

BREZINA, EDWARD SHARP, JR. OBG 098
2101 CHELSEA DR. A AC
WILSON 27893

BRICE, ROBERT SAMUEL, JR. IM /GE 034
1901 HAWTHORNE RD., STE. 310 A AC
WINSTON-SALEM 27103 919 760-4340

BRIDGERS, STEPHEN B. FP 009
PO BOX 2231 AC
ELIZABETHTOWN 28337 919 862-8885

BRIDGES, THOMAS HOWARD EM 023
P. O. BOX 1706 AC
SHELBY 28150 704 487-3134

BRIGGS, DOUGLAS MERRILL FP 023
1198 WYKE ROAD AC
SHELBY 28150 704 487-1148
FAX 704 487-7753

BRIGGS, JOHN GLENN, JR. PS 026
1774 METRO MEDICAL DR. P AC
FAYETTEVILLE 28304 919 323-1203
FAX 919 483-1130

BRIGHAM, CRAIG D. ORS 060
1001 BLYTHE BLVD., #200 A AC
CHARLOTTE 28203 704 373-0544

BRIGHT, DON CLARK AN 074
1705 W. SIXTH STREET A AC
GREENVILLE 27834 919 752-2140

BRIGMAN, PAUL HAMER EM 040
2807 EARLHAM PLACE L
HIGH POINT 27263 919 434-4007

BRINKHOUS, KENNETH MERLE PTH /HEM 032
UNC, DEPT.OF PATH., 228-H A L
CHAPEL HILL 27599 919 966-1061
FAX 919 966-6718

BRINKLEY, WILLIAM MCCALL, JR. 034
826 BRENT ST. A S
WINSTON-SALEM 27103 919 724-2845

BRINKMAN, DENNIS MICHAEL AN 098
1203 GREENBRIAR COURT A AC
WILSON 27893 919 291-1700

BRINKMAN, LINDA EVES 074
10 PALMETTO PLACE A R
GREENVILLE 27858 919 355-6121

BRINTON, LEWIS FLOYD GS /GYN 049
603 E. CENTER AVE. AC
MOORESVILLE 28115 704 664-1414

BRITT, BENJAMIN EARL P 092
1209 GLEN EDEN DR. A L/RT
RALEIGH 27612 919 876-0287

BRITT, SAMUEL EMERSON, II GS 078
295 W. 27TH ST. A AC
LUMBERTON 28358 919 738-8556

BRITT, TILMAN CARLISLE, JR. CD /IM 086
216 GRACE STREET A L/RT
MOUNT AIRY 27030 919 786-5745

BRIZEL, DAVID MANFIELD TR 032
BOX 3085, DUMC A AC
DURHAM 27710 919 684-3742
FAX 919 684-3953

BRNA, THEODORE GEORGE, JR. FP /GER 098
BAILEY FAMILY PRACTICE CTR. AC
115 W. DEANS ST.
BAILEY 27807 919 235-4181
FAX 919 235-2950

BROCK, JULIAN STANLEY R 064
200 ENGLEWOOD DRIVE A L/RT
ROCKY MOUNT 27804 919 443-1353

BROCK, MARGARET FUNCH 034
1105 WETHERBURN CT. A S
WINSTON-SALEM 27104 919 768-2750

BROCKMAN, STEVEN KENNETH AN 023
300 E. GROVER ST. AC
SHELBY 28150 704 482-5716

BRODER, MICHAEL SYLVAN DR 029
PO BOX 789 A AC
THOMASVILLE 27360 919 472-2000

BRODIE, BRUCE ROGERS CD /IM 041
520 N. ELAM AVE. A AC
GREENSBORO 27403 919 547-1700

BRODIE, HARLOW KEITH HAMMOND P 032
DUKE UNIV. ALLEN BLDG. RM 207 A AC
DURHAM 27706 919 684-2424

BRODISH, PAUL HENRY 034
1900 QUEEN ST., APT. C-7 S
WINSTON-SALEM 27103 919 766-8447

BROMBERG, PHILIP ALLAN IM /PUD 032
724 CLI. SCI. BLDG. CB #7020 AC
UNC, DIV. PULMONARY DISEASE
CHAPEL HILL 27599 919 966-2531
FAX 919 966-7524

BRONEC, PETER ROBERT NS 032
DURHAM CLINIC, PA A P AC
PO BOX 15249
DURHAM 27704 919 479-4100

BROOKS, CHARLES MICHAEL OBG 054
KINSTON CLINIC NORTH A AC
DOCTORS DR., STE. E
KINSTON 28501 919 522-3373

BROOKS, CLYDE LONG, JR. IM 007
615 E. 12TH ST. AC
WASHINGTON 27889 919 946-2101

BROOKS, CONNIE LYNN 074
1135 TREYBROOKE CIR. S
GREENVILLE 27834 919 830-6842

BROOKS, JEAN BAILEY GYN 041
1100 N. ELM STREET A L/RT
GREENSBORO 27401 919 273-8658

BROOKS, JOHN IRVING, JR. IM 033
TARBORO CLINIC A AC
101 CLINIC DR.
TARBORO 27886 919 823-4212
FAX 919 823-3164

BROOKS, MARTIN LUTHER GP 078
711 HIGHWAY E. A P AC
P. O. BOX 37
PEMBROKE 28372 919 521-4221

BROOKS, MICHAEL ANTHONY DR 070
106 S. WATER ST. AC
ELIZABETH CITY 27909 919 338-1193

BROOKS, RALPH ELBERT, JR. U 040
624 QUAKER LN. STE. E-100 A AC
HIGH POINT 27262 919 886-5151

BROOKS, THOMAS WILLIAM, III R /NM 018
521 THIRD AVENUE, N.W. A AC
HICKORY 28601 704 322-2644

BROOKS, WILLIAM LESTER, JR. IM /RHU 060
CHARLOTTE INT. MED. ASSOCIATES A AC
411 BILLNGSLEY RD., #105
CHARLOTTE 28211 704 333-4175

BROSNAN, WALTER HAWKINS OPH 011
2 DOCTORS PARK AC
417 BILTMORE AVE.
ASHEVILLE 28801 704 254-9693
FAX 704 254-9695

BROST, BRIAN C. OBG 032
6601 AMHERST DR. S
OCEAN SPRINGS, MS 39564

BROSTROM, RICHARD JAMES 032
16 OLD UNIVERSITY STATION DR. S
CHAPEL HILL 27514 919 942-8554

BROTHERS, MICHAEL FRANCIS R 032
BOX 3808, DUMC AC
DURHAM 27710 919 681-2711

BROUETTE, THOMAS EDWARD 034
2116 QUEEN ST. A S
WINSTON-SALEM 27103 919 721-9151

BROWN, ALAN REID DR 044
848 GOLFSIDE DR. A L
SEBRING, FL 33872

BROWN, ALBERT BELMONT GYN 065
1615 DOCTOR'S CIR. A L
WILMINGTON 28401 919 343-1122

BROWN, ANNE BARBARA 034
808 CALIFORNIA AVE. S
PITTSBURGH, PA 15202

BROWN, CHARLES CALVIN AN 070
211 ROUNDTREE DR. A AC
ELIZABETH CITY 27909 919 338-1542

BROWN, CHARLES KEVIN EM 074
DEPT. OF EMERGENCY MEDICINE A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4757

†BROWN, CHARLES WILLIAM GYN /OBS 060
2127 QUEENS ROAD, EAST A
DECEASED--11-22-90
CHARLOTTE 28207 704 333-9852

BROWN, CYNTHIA J. HECKER PD 011
77 MCDOWELL RD. AC
ASHEVILLE 28801 704 684-1000

BROWN, DANIEL ELMER PD 092
3124 BLUE RIDGE RD.,STE. 102 AC
RALEIGH 27612 919 782-0021

BROWN, DAVID ALLEN AI 011
390 S. FRENCH BROAD AVE. A P AC
ASHEVILLE 28801 704 254-5366

BROWN, DAVID HOUSTON EM /GER 043
PO BOX 399 AC
BUIES CREEK 27506 919 893-5141

BROWN, DAVID WARREN IM 032
891 W. WILLOW DRIVE AC
CHAPEL HILL 27514 919 942-5123

BROWN, DONALD CLAUDE FP /GER 092
305-B S. ACADEMY ST. A AC
CARY 27511 919 467-3730

BROWN, ERNEST HYDE, JR. OBG 078
4300 FAYETTEVILLE ROAD A AC
LUMBERTON 28358 919 738-9601

BROWN, FRANK MAC ORS 045
1027 FLEMING STREET AC
HENDERSONVILLE 28739 704 692-5781

BROWN, FRANK REID IM 041
1103 COUNTRY CLUB DRIVE A L/RT
GREENSBORO 27408 919 272-5048

BROWN, GEORGE WALLACE FP 044
102 BROWN AVENUE * AC
HAZELWOOD 28738 704 456-6021

BROWN, JAMES WALTER, JR. OTO /HNS 013
633 GRANDVIEW DR., NE A L/RT
CONCORD 28025 704 782-8316

BROWN, JOHN MARK IM /EM 032
3605 SWEETEN CREEK RD. AC
CHAPEL HILL 27514 919 490-4406

BROWN, MALCOLM M. IM /RHU 034
1900 S. HAWTHORNE RD. AC
312 FORSYTH MEDICAL PK.
WINSTON-SALEM 27103 919 659-9218

BROWN, MARTIN TODD OPH 060
1718 E. FOURTH ST. #207 A AC
CHARLOTTE 28204 704 377-3689
FAX 704 334-3707

BROWN, PAUL EUGENE ORS 018
250 18TH ST. CIR. SE AC
HICKORY 28602 704 322-5172

BROWN, RAEFORD E., JR. AN 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-4498

BROWN, RHETT LEROY 060
421-A N. CHURCH ST. A R
CHARLOTTE 28202 704 355-2000

BROWN, ROBERT CALVIN CLP /PTH 041
223 FLEMINGTON RD. A AC
CHAPEL HILL 27514 919 929-0922

BROWN, ROBERT LEE 074
202 SHILOH DR. #A A S
GREENVILLE 27834 919 355-3223

BROWN, RONALD LAUCHLIN OBG 060
2711 RANDOLPH RD. STE. 305 AC
CHARLOTTE 28207 704 372-8020

BROWN, SHEILA ELAINE 034
1900 QUEEN ST., #B1 S
WINSTON-SALEM 27103 919 773-0490

BROWN, STEVEN DUNNING PUD /CCM 065
1719 S. LIVE OAK PKY. C
WILMINGTON 28403 919 341-3376

BROWN, SUSAN EVANS FP 032
5501 FORTUNE'S RIDGE, STE. A AC
DURHAM 27713 919 493-8877

BROWN, THOMAS LAWRENCE OBG 034
145 AFTONSHIRE COURT P AC
WINSTON-SALEM 27104 919 765-2802

BROWN, THOMAS WALTER P /LM 092
920-A PAVERSTONE DR. A AC
RALEIGH 27615 919 847-2624

BROWN, VASCUE O'NEIL P 060
3532 MOUNTAINBROOK ROAD AC
CHARLOTTE 28210 704 553-1179

BROWN, WALLACE DAVID PD 092
3708 LUBBOCK DRIVE AC
RALEIGH 27612 919 872-0250

BROWN, WALTER JOHN PH /FP 019
79 TRUNDLE RDG.FEARRINGTON A AS
PITTSBORO 27312 919 933-9331

BROWN, WILLIAM EDWARD OBG 074
2245 STANTONSBURG RD., STE. H A AC
GREENVILLE 27834 919 757-3131

BROWN, WILLIAM LEE IM 042
PO DRAWER 158 A AC
ROANOKE RAPIDS 27870 919 537-0134

BROWN, WILLIAM RAY, JR. NS 034
2825 LYNDHURST AVE. A AC
WINSTON-SALEM 27103 919 765-3750

BROWNE, GEOFFREY H. 074
1600 LONGWOOD DR. * S
GREENVILLE 27858 919 355-7607

BROWNE, JAMES DALE OTO 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4161

BROWNING, DAVID JUDSON OPH 060
1600 E. THIRD ST. AC
CHARLOTTE 28204 704 358-4138

BROWNING, DOUGLAS GUY FP 034
2050 CRAIG ST., APT. 23 A R
WINSTON-SALEM 27103 919 723-6603

BROWNLEE, ROBERT CALVIN PD 032
111 SILVER CEDAR COURT A AC
CHAPEL HILL 27514 919 929-0461

BRUCE, JAMES CRAWFORD IM /CD 041
1036 PROFESSIONAL VILLAGE A L/RT
GREENSBORO 27401 919 378-9180

BRUCE, KAREN EMY FP 074
ECU SCHOOL OF MEDICINE A AC
DEPT. OF FAMILY MEDICINE
GREENVILLE 27858 919 551-2021

BRUCH, RICHARD FRANKLIN ORS /GER 032
TRIANGLE ORTHOPAEDIC ASSOC. A P * A
2609 N. DUKE STREET
DURHAM 27704 919 220-5255
FAX 919 220-5568

BRUENING, FREDERICK L. OPH 034
3746 VEST MILL RD. A P AC
WINSTON-SALEM 27103 919 765-6900

BRUGGERS, BARRY ALAN OBG 092
101 S. W. CARY PKY. STE. 170 AC
CARY 27511 919 467-5941

BRUMBACK, GEORGE FRANKLIN OPH 041
1105 MONTPELIER A AC
GREENSBORO 27401 919 274-4626

BRUNETTI, LOUIS LEO IM /LM 060
4912 CHARMAPEG AVE. A AC
CHARLOTTE 28211 704 365-0104

BRUNSTETTER, RICHARD W. P 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-6236

BRUTON, HENRY DAVID PD 063
195 W. ILLINOIS AVE. A * AC
SOUTHERN PINES 28387 919 692-2444
FAX 919 692-3651

BRYAN, EDWIN LANCASTER IM /CD 041
510 N. ELAM AVE. #201 A P * AC
GREENSBORO 27403 919 299-5454

BRYAN, JAMES A., III OPH 032
110 CONNER DR. STE. #2 A AC
CHAPEL HILL 27514 919 942-8701

BRYAN, JAMES ALEXANDER, II IM /HEM 032
NC MEMORIAL HOSPITAL AC
DEPT. OF MEDICINE
CHAPEL HILL 27599 919 966-2268

BRYAN, JOHN HUGH TR /PHO 026
DEPT. OF RADIATION ONCOLOGY AC
BOX 41208, CAPE FEAR MED. CTR.
FAYETTEVILLE 28304 919 323-6690

BRYAN, PAT CHAPPELL OBG 032
120 CONNER DR., STE 101 AC
CHAPEL HILL 27514 919 942-8571

BRYAN, THOMAS RHUDY, JR. PD /OBS 097
MEDICAL ARTS BUILDING AC
P. O. BOX 1163
NORTH WILKESBORO 28659 919 838-2500

BRYAN, W. BLAIR PD 060
1700 ABBEY PLACE A AC
CHARLOTTE 28209 704 523-7232

BRYAN, WILLIAM ALEXANDER, III PD 011
ASTON PARK CENTER A AC
53 S. FRENCH BROAD AVENUE
ASHEVILLE 28801 704 258-0969
FAX 704 258-8403

BRYANT, JAMES EDWARD FP 064
P. O. BOX 589 AC
ROCKY MOUNT 27801 919 977-6701

BRYANT, WILLIAM FRANKLIN, JR. PD 060
1700 ABBEY PLACE A * AC
CHARLOTTE 28209 704 523-7232

BUCCINI, ROBERT V. GE /IM 041
1511 WESTOVER TERR., STE. 108 A AC
GREENSBORO 27408 919 378-0713
FAX 919 273-9060

BUCH, HAL NATHAN 074
127 TABER AVE. S
PROVIDENCE, RI 02906

BUCHANAN, DALE CONWAY AN /PD 060
4217 HORSESHOE BEND AC
MATTHEWS 28105 704 338-2372

BUCHANAN, ROBERT A., JR. CD /IM 032
2609 N. DUKE ST., STE 403 AC
DURHAM 27704 919 471-8441

BUCHANAN, SCOTT A. 032
2A CARSON CIRCLE S
DURHAM 27705 919 383-8367

BUCHIN, DAVID LEE GP /P 092
14212 CROSS CREEK ROAD AC
RALEIGH 27615 919 872-5411

BUCK, THERESA ANN 034
671 CROSTON DR. A S
WINSTON-SALEM 27104 919 760-9636

BUCKALEW, VARDAMAN M. JR. NEP /IM 034
300 S. HAWTHORNE ROAD AC
WINSTON-SALEM 27103 919 748-2062

BUCKLEY, EDWARD GEORGE OPH /PD 032
BOX 3802, DUKE EYE CENTER A AC
DURHAM 27705 919 684-6084
FAX 919 684-8983

BUCKWALTER, JOHN D. AN 032
RT. #7, BOX 60 AC
DURHAM 27707 919 470-4000

BUFF, SAMUEL JOSEPH DR 025
P. O. BOX 2065 AC
NEW BERN 28560 919 633-5057

BUFFONG, ERIC ARNOLD OBG /END 067
1703 COUNTRY CLUB RD.,STE.203 AC
JACKSONVILLE 28540 919 346-2182

BUGG, CHARLES PAULETT PD 092
5807 SENTINEL DR. AC
RALEIGH 27609 919 779-0777

BUGG, EVERETT IRVING, JR. ORS 032
RT. #2, BOX 143 A L
PITTSBORO 27312 919 286-1249

BUIE, STEPHEN E. P /IM 011
HIGHLAND HOSPITAL A AC
PO BOX 1101
ASHEVILLE 28802 704 254-3201

BUKHARI, MUSHTAQ AHMAD GE /IM 012
560 MALCOLM BLVD. AC
WESTERN PIEDMONT CLI.
VALDESE 28671 704 879-8335

BULLA, JEFFERSON DAVIS, II FP 001
780 WOODY DRIVE AC
GRAHAM 27253 919 228-1354

BULLARD, ANDREW GRAY IM /PUD 053
1135 CARTHAGE ST. STE. 107 A * R
SANFORD 27330 919 684-8111

BULLARD, DENNIS EUGENE NS 092
3009 NEW BERN AVE. A AC
PO BOX 14027
RALEIGH 27620 919 231-3320
FAX 919 832-1647

BULLARD, GRAHAM WESLEY AN 060
PO BOX 36351 A P AC
CHARLOTTE 28236 704 375-6792

BULLARD, HOKE VOGLER, JR. IM 098
WILSON CLINIC A AC
WILSON 27893 919 399-2408

BULLARD, TERESA 074
EVANS MHP, BOX #7 S
WINTERVILLE 28590 919 355-0220

BULLEN, DORIS C.M. P 063
PO BOX 56 A AC
DARTMOUTH CLINIC, PA
SOUTHERN PINES 28387 919 692-6471

BULLINGTON, WALTER GRAHAM OPH /AM 060
4335 COLWICK RD. A P * AC
CHARLOTTE 28211 704 364-7400
FAX 704 364-9830

BULLOCK, THURMAN MONROE, JR. FP /A 024
PO BOX 465 RT
CHADBOURN 28431 919 654-5369

BULLOCK, WILLIAM ROBERT IM /OM 060
217 TRAVIS AVENUE AC
CHARLOTTE 28204 704 372-3350
FAX 704 373-0943

BUMGARNER, JOHN HENRY AN 080
420 PRINCETON DR. A P AC
SALISBURY 28144 704 638-1000

BUMGARNER, JOHN REED CD /CD 041
221 MISTLETOE DR. A L/RT
GREENSBORO 27403 919 373-1123

BUNCE, PAUL LESLIE U 032
970 FAIRFIELD DR. L/RT
CHAPEL HILL 27514 919 933-8766

BUNCH, MARY ELIZABETH IM /PUD 011
P. O. BOX 956 A L/RT
BLACK MOUNTAIN 28711 704 669-8117

BUNDY, ROBERT FRANCIS, JR. 074
3215 SUMMER PL., APT. #17 A S
GREENVILLE 27834 919 355-8733

BUNDY, WILLIAM LUMSDEN IM /GP 097
PO BOX 786 A L/RT
N. WILKESBORO 28659 919 838-2550

BUNEMANN, LEE M. PD 034
1590-H WOODS RD. A R
WINSTON-SALEM 27106 919 722-2953

BUNN, DAVID GLENN GP 024
EAST MAIN STREET AC
WHITEVILLE 28472 919 642-2016

BUNN, DAVID GLENN, JR. OBG 065
2215 CANTERWOOD DR. AC
WILMINGTON 28401 919 763-1031

BURAPAVONG, THAVIJ DAVID PS /GS 040
416 GATEWOOD AVENUE * AC
HIGH POINT 27260 919 882-2531
FAX 919 884-8254

BURCH, LARRY THOMAS P 045
GLASSY MOUNTAIN DR. A AC
PO BOX 160
FLAT ROCK 28731 704 692-4900

BURCH, WILLIAM HOBART FP 045
BOX 285, HARRIS RD AND 74 A AC
LAKE LURE 28746 704 625-9121

BURCHETTE, BRUCE WILSON 041
1411 CARDINAL PL. R
GREENSBORO 27408 919 758-6981

BURCHFIELD, WILLIAM JOHN OPH 013
500 LAKE CONCORD RD., NE A AC
CONCORD 28025 704 782-1127

BURDETTE, FRED MCPHERSON, JR. GP 065
1232-A COLUMBUS CIR. A L/RT
WILMINGTON 28403 919 762-9463

BURDICK, RICHARD LAWRENCE IM 098
1704 S. TARBORO ST. A AC
WILSON 27893 919 399-2408

BURGESS, GLENN NORMAN P 034
2422-B REYNOLDA RD. AC
WINSTON-SALEM 27106 919 722-5022

BURGESS, WILLIAM PATRICK NEP /IM 060
928 BAXTER STREET A AC
CHARLOTTE 28204 704 374-1321

BURHANS, ROLLIN SCOFIELD, JR. GS 032
PO BOX 15249 AC
3901 ROXBORO RD.
DURHAM 27704 919 479-4100

BURKART, JOHN IM /NEP 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-3963

BURKART, THOMAS ELMA NEP 074
6 DOCTOR'S PARK A AC
GREENVILLE 27834 919 752-8880
FAX 919 752-4893

BURKE, ANNETTE BLACKMON PD 078
4117 VANN DRIVE AC
LUMBERTON 28358 919 739-0243

BURKE, ANTHONY LEE GS 080
709 BARKER ST. A AC
SALISBURY 28144 704 633-3441

BURKE, DAVID JOSEPH ORS 013
528 LAKE CONCORD ROAD, N. E. AC
PO BOX 1606
CONCORD 28025 704 788-3155
FAX 704 788-3487

BURKE, JAMES GILLUM ORS 086
414 W. LEBANON STREET AC
P. O. BOX 1544
MOUNT AIRY 27030 919 789-9041

BURKE, JAMES OTIS, JR. PD 029
8 MEDICAL PARK DRIVE AC
LEXINGTON 27292 704 249-4911

BURKE, JOSEPH ANTHONY R 078
4117 VANN DRIVE AC
LUMBERTON 28358 919 276-2121

BURKE, MARGARET OBER PM 011
PO BOX 15025 A AC
ASHEVILLE 28813 704 274-2400

BURKE, PATRICK PD 060
5950 FAIRVIEW RD. STE. 100 AC
3 FAIRVIEW PLAZA
CHARLOTTE 28210 704 551-4200

BURKE, WILLIAM ALLEN D 074
502 WINSTEAD RD. AC
GREENVILLE 27834 919 551-2555

BURKHARDT, NATHAN LESLIE, JR. ORS 011
129 MCDOWELL ST. AC
ASHEVILLE 28801 704 258-8800

BURKHART, CECIL ROBERT PTH /CLP 079
1006 OAKCREST DRIVE AC
REIDSVILLE 27320 919 349-8461

BURKHART, CHARLES ANDREW GP 034
345 WESTVIEW DRIVE, S.W. A AC
WINSTON-SALEM 27104 919 761-1541

BURKHART, VERNON ANDERSON OM /IM 041
2700 W. MARKET ST. AC
GREENSBORO 27403 919 379-6961

BURLESON, WILLIAM ROWELL U 078
101 WEST 27TH STREET AC
LUMBERTON 28358 919 738-7166

BURNETT, BRENT ALAN FP 041
PO BOX 220 AC
SUMMERFIELD 27358 919 643-7711

BURNETT, JOHN WESLEY, JR. FP 025
810 KENNEDY AVE. A AC
NEW BERN 28560 919 633-1678

BURNETTE, HOWARD OLSEN GP 076
108 N. COBLE STREET L/RT
RANDLEMAN 27317 919 498-2500

BURNETTE, J. P. IM 098
ENGLEWOOD DR., KENLY CLI. A AC
KENLY 27542 919 284-5151

BURNEY, DONALD PATRICK CDS /TS 041
1317 N. ELM ST., STE. 1 A AC
GREENSBORO 27401 919 373-8245

BURNEY, FREDRIC ARLEN FP 004
402 MORVEN ROAD AC
WADESBORO 28170 704 694-2129

BURNHAM, STEVEN JAMES GS 032
UNC, DEPT. OF VS A AC
229-H CLINICAL SCIENCE BLDG.
CHAPEL HILL 27599 919 966-3391

BURNS, MARGARET VIRGINIA P 011
POB 8724 A L
ASHEVILLE 28814 704 253-3398

BURNS, STANLEY SHERMAN, JR. OTO 060
1600 E. THIRD STREET AC
CHARLOTTE 28204 704 358-4111

BURNS, WALTER WOODROW, JR. GS 032
PO BOX 15249 A AC
3901 ROXBORO RD.
DURHAM 27704 919 967-8258

BURQUEST, BRET P 060
6404 CARMEL RD., STE. 202 A AC
CHARLOTTE 28226 704 541-0800

BURROUGHS, FRANKLIN DANFORD FP 092
4812 SLEEPY HOLLOW DR. AC
RALEIGH 27612 919 870-9889

BURROUGHS, FREDERICK DOUGLAS PD 092
100 SUNNYBROOK ROAD, STE. 202 AC
RALEIGH 27610 919 821-3180

BURROUGHS, PAUL LEACH, JR. ORS 092
3410 EXECUTIVE DRIVE A P AC
RALEIGH 27609 919 872-5296

BURROUGHS, RUTH REUBEN PH /PD 092
6413 MARGATE COURT A L/RT
RALEIGH 27612 919 781-5015

BURRUS, JAMES HENRY GYN 023
P. O. BOX 1256 AC
SHELBY 28150 704 482-2486

BURT, TERRENCE WILLIAM EM 011
405 WINDSWEPT DR. #703 P AC
ASHEVILLE 28801 704 255-3786

BURTON, ASHBY J., III FP 042
PO BOX 710 A AC
RICH SQUARE 27869 919 539-2082

BURTON, CLAUDE SHREVE,III D /IM 032
BOX 3511, DUMC AC
DURHAM 27710 919 684-5037

BURTON, EARL EDWARD, JR. D /IM 092
3900 BROWNING PLACE A AC
RALEIGH 27609 919 782-2735

BURTON, HARRY G., III CDS /TS 011
257 MCDOWELL ST. A P AC
ASHEVILLE 28803 704 258-1121

BURTON, JOHN H. 032
ONE MAPLE DR. A S
CHAPEL HILL 27514 919 967-9372

BURTON, MARK WESLEY IM 059
500 MEDICAL COURT WEST C
MARION 28752 704 652-7776

BURTON, PHILIP DOUGLAS FP 092
802 S. MAIN ST. AC
WAKE FOREST 27587 919 556-7111

BURWELL, WALTER BRODIE IM 091
317 ORANGE STREET L
HENDERSON 27536 919 438-5619

BUSBY, JULIAN GOODE, JR. OBG 040
307 N. LINDSAY ST. A AC
HIGH POINT 27260 919 885-0149

BUSBY, MERLE RUDY GS 080
901 W. HENDERSON STREET A AC
SALISBURY 28144 704 633-1581

BUSBY, WILLIAM JARVIS ORS 029
105 PINEYWOOD ROAD AC
THOMASVILLE 27360 919 475-8141

BUSCH, JAMES R. PD 098
1700 S. TARBORO ST. A AC
WILSON 27893 919 291-4370

BUSH, JEFFREY SULLIVAN 074
800 HEATH ST. #19 A S
GREENVILLE 27834 919 757-0729

BUSH, RONALD EARL IM 011
2561 HENDERSONVILLE RD. AC
ARDEN 28704 704 684-0011

BUSH, RUTH LEE 032
213 PUREFOY RD. #B S
CHAPEL HILL 27514 919 929-1382

BUSHER, JANICE THERESE IM 074
133 ANTLER RD. AC
GREENVILLE 27834 919 551-4633

BUSS, DAVID HUMPHREY PTH /HEM 034
237 GRANDVIEW DRIVE AC
WINSTON-SALEM 27104 919 748-2641

BUSSE, EWALD WILLIAM P /GER 032
BOX 2948, DUMC L
DURHAM 27710 919 684-3416
FAX 919 684-8666

BUSTARD, VICTOR WILLIAM OBG /GYN 025
800 HOSPITAL DR., STE. #2 A AC
NEW BERN 28560 919 633-3339

BUTER, THOMAS HENRY ORS 060
120 PROVIDENCE ROAD A AC
CHARLOTTE 28207 704 377-0351
FAX 704 373-0746

BUTLER, CAREY JONES OTO /OT 026
516 OWEN DRIVE A P * AC
FAYETTEVILLE 28304 919 485-6101

BUTLER, DOROTHY WOLF OBG 074
ECU, DEPT. OF OB/GYN A R
GREENVILLE 27858 919 551-4669

BUTLER, FREDERICK CLARENCE, JR OPH 065
1915 GLEN MEADE ROAD A AC
WILMINGTON 28403 919 763-3601

BUTLER, JAMES HILTON R 034
3155 MAPLEWOOD AVENUE A AC
WINSTON-SALEM 27103 919 765-2702

BUTLER, LARRY STEPHEN OBG 053
1832 DOCTOR'S DR. P AC
SANFORD 27330 919 774-8761

BUTLER, PETER CAWOOD 074
ECU, BRODY 2 N-72 C
GREENVILLE 27858 919 551-2767

BUTLER, RADFORD NORMAN IM 034
1881 WILLIAMS RD. L/RT
LEWISVILLE 27023 919 945-5563

BUTLER, ROBERT HOYT GE 076
550 WHITE OAK STREET AC
ASHEBORO 27203 919 625-3218

BUTLER, THOMAS WAYNE IM /HEM 074
DEPT.OF MED/HEM-ONCOLOGY A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2560

BUTTERFIELD, MARIAN ISBEY 032
2025 WOODROW ST. S
DURHAM 27705 919 286-7099

BUTTERLY, DAVID WM. 032
705 CROSSTIMBERS DR. R
DURHAM 27713 919 684-8111

BUTTERWORTH, JOHN F., IV AN 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-3613
FAX 919 748-4204

BUTTS, JOHN DAVIS, JR. FOP 032
OFF.OF CHIEF MEDICAL EXAMINER * AC
CHAPEL HILL 27599 919 966-2253

BYERLY, JAMES HAMPTON GP 053
P. O. BOX 340 A L
SANFORD 27330 919 775-5932

BYERLY, WESLEY GRIMES, JR. GS 018
24 SECOND AVENUE, N.E. * AC
HICKORY 28601 704 328-4999

BYLCIW, STANLEY ROBERT ORS 051
PO BOX 1538 A P AC
SMITHFIELD 27577 919 934-1094

BYNUM, DONALD K., JR. ORS /HS 032
245 BURNETT-WOMACK BLDG. 229-H A AC
UNC SCHOOL OF MEDICINE
CHAPEL HILL 27599 919 966-2030

BYNUM, ROBERT WILLIAM, IV NEP /IM 064
100 NASH MEDICAL ARTS MALL A AC
ROCKY MOUNT 27804 919 443-9084

BYRD, KERRY WENDELL 034
PO BOX 236 R
FPO SEATTLE, WA 98764

BYRD, VERNON DALE 074
1249 SPRING CREEK DR A S
NASHVILLE TN 37209

BYRD, VICKI MARIE 074
RT. #1, BOX 268-C A S
DEEP RUN 28525 919 523-5865

BYRD, WILLIAM EUGENE RHU /IM 042
1724 E. 10TH ST. AC
PO BOX 1093
ROANOKE RAPIDS 27870 919 535-1082

BYRNE, JOHN JACOB AN 060
PO BOX 32861 A P AC
CHARLOTTE 28232 704 355-2372

BYRNES, THOMAS HENDERSON,JR. IM /CD 029
309 PINEYWOOD ROAD A * AC
THOMASVILLE 27360 919 475-8121

BYRNETT, JEFFREY WILLIAM GS /VS 001
1624 MEMORIAL DR. A * AC
BURLINGTON 27215 919 229-6428

BYRON, ROBERT SILL P 011
675 BILTMORE AVENUE A P AC
ASHEVILLE 28803 704 254-5369

BYRUM, CLIFFORD CONWELL GYN 092
1221 DIXIE TRAIL A L
RALEIGH 27607 919 782-0124

BYRUM, GRAHAM VANCE FP 042
P. O. BOX 540 A AC
SCOTLAND NECK 27874 919 826-3143

BYRUM, GRAHAM VANCE, JR. IM /NEP 074
6 DOCTORS PARK A AC
GREENVILLE 27834 919 752-8880
FAX 919 752-4893

CABERWAL, DALJIT SINGH U 076
P. O. BOX 1509 AC
ASHEBORO 27203 919 625-3997

CABINUM, DOMINGO E., JR. ORS 008
PO BOX 457 AC
AHOSKIE 27910 919 332-8344

CABLE, THOMAS ALLEN FP 041
206 FISHER PARK CIRCLE A AC
GREENSBORO 27401 919 379-4132

CABRAL, DEBORAH BARBARA FP 029
208-B W. CENTER ST. A AC
LEXINGTON 27292 704 249-2921

CABUGWASON, LUCILA NOVAL GP 084
28 N. MAIN ST. AC
PO BOX 726
NORWOOD 28128 704 474-3171

CACERES, MARCO ANTONIO GS /TS 042
PO BOX 458 A AC
ROANOKE RAPIDS 27870 919 537-6525

CADDELL, TILLIE HORKEY GP 063
P. O. BOX 519 A L
PINEHURST 28374 919 295-5511

CAHILL, WILLIAM THOMAS N 060
MECKLENBURG NEURO. ASSOC A AC
1900 RANDOLPH RD., STE. 1010
CHARLOTTE 28207 704 334-7311

CAHN, JACK RICHARD FP 003
616 DOCTOR'S ST. AC
SPARTA 28675 919 372-5606

CAIN, FRANK CORAL, JR. GP 036
224 NEW HOPE ROAD AC
GASTONIA 28052 704 865-8241

CALDEMEYER, JOHN EVERETT DR 045
807 JUSTICE ST. AC
HENDERSONVILLE 28739 704 693-1441

CALDWELL, BRUCE FRANCIS EM /GS 082
P. O. BOX 1006 A AC
CLINTON 28328 919 592-8511

CALDWELL, DAVID STEWART RHU /IM 032
BOX 2978, DUMC A AC
DURHAM 27710 919 684-8844

CALDWELL, JESSE BURGOYNE, JR. GYN 036
1307 PARK LANE A L/RT
GASTONIA 28052 704 865-0968

CALDWELL, LAWRENCE M. II GE /IM 018
P. O. BOX 849 A AC
NEWTON 28658 704 464-4550

CALHOUN, AUBREY DANIEL IM 049
403 E. STATESVILLE AVE. AC
MOORESVILLE 28115 704 663-4443

CALIFF, JAMES C. ORS 001
316 N. GRAHAM-HOPEDALE RD. A AC
BURLINGTON 27217 919 227-3621

CALL, DAVID LEE DR 079
MOREHEAD MEM. HOSP.-RAD AC
EDEN 27288 919 623-9711

CALL, KENNETH D. 074
110 FOX RUN CIR. A S
GREENVILLE 27858 919 752-1732

CALLAGHAN, WILLIAM M. OBG 011
143 ASHELAND AVE. A AC
ASHEVILLE 28801 704 258-9191

CALLAHAN, JOSEPH BRODHEAD OBG 091
MEDICAL ARTS BUILDING A AC
HENDERSON 27536 919 492-8576

CALLAWAY, CLIFFORD KAY EM 060
PO BOX 667967 AC
CHARLOTTE 28266 704 588-3418

CALLAWAY, JASPER LAMAR D 032
26 STONERIDGE CIR. A L/RT
DURHAM 27705 919 684-3432

CALLAWAY, SAMUEL CLAYTON, JR. OTO 065
2311 DELANEY ROAD AC
WILMINGTON 28403 919 762-8754

CALLISON, WILLIAM JOSEPH ORS 011
STE. 101, 445 BILTMORE CENTER A AC
ASHEVILLE 28801 704 254-7271

CAMBLOS, JOSHUA FRY BULLITT GS /GYN 011
17 FOREST ROAD A L/RT
ASHEVILLE 28803 704 274-2794

CAMERON, HAROLD H. OPH 025
802 MCCARTHY BLVD. A AC
NEW BERN 28562 919 633-4183

CAMNITZ, PAUL SAMUEL OTO 074
BOX 5007 A AC
GREENVILLE 27834 919 752-5227

CAMP, EDWARD HAYS GS 044
112 BALSAM DRIVE A L/RT
WAYNESVILLE 28786 704 456-9858

CAMP, JOHN FREDERICK AN 060
6901 N. BALTUSROL LANE A P AC
CHARLOTTE 28210 704 375-6792

CAMP, THOMAS FRANCIS, JR. IM /CD 092
2800 BLUE RIDGE, STE. 205 AC
RALEIGH 27607 919 782-0414

CAMPANO, MANUEL OSWALDO PTH 041
P. O. BOX X-3 A AC
GREENSBORO 27402 919 854-6462

CAMPBELL, ALLEN BARRY OBG 011
93 VICTORIA ROAD A * AC
ASHEVILLE 28801 704 253-4821
FAX 704 255-0376

CAMPBELL, CHARLES BRUCE, III OPH 034
2827 LYNDHURST AVE.,STE. 204 AC
WINSTON-SALEM 27103 919 768-0725

CAMPBELL, CHERRI D. HOBGOOD 032
201-A CEDARWOOD LN R
CARRBORO 27510 919 967-7336

CAMPBELL, DIANE JANE OBG 074
2315 EXECUTIVE PARK CIR. A P AC
PO BOX 8307
GREENVILLE 27835 919 830-1035
FAX 919 830-0827

CAMPBELL, DONALD BARNES IM 092
3100 BLUE RIDGE RD. AC
RALEIGH 27612 919 781-7500

CAMPBELL, ELIZABETH E. HEM /IM 032
143 LOBLOLLY LANE A C
CHAPEL HILL 27516 919 966-4431

CAMPBELL, FRANCIS MICHAEL GS 049
642 CARPENTER AVE. AC
MOORESVILLE 28115 704 663-7905

CAMPBELL, FRANK HIGHSMITH GS /TS 026
P. O. BOX 53651 A AC
FAYETTEVILLE 28305 919 485-6161

CAMPBELL, JAMES ARCHIBALD OBG 060
2015 RANDOLPH RD. AC
CHARLOTTE 28207 704 376-3536

CAMPBELL, ROBERT RICHARD R 096
2700 MEDICAL OFFICE PLACE A AC
GOLDSBORO 27530 919 734-1866
FAX 919 736-1804

CAMPBELL, WALKER HAWES OBG 096
102 HANDLEY PARK CT. A AC
GOLDSBORO 27534 919 734-3344

CAMPORESI, ENRICO MARIO AN 032
750 E. ADAMS ST. AC
DEPT. OF ANES.
SYRACUSE, NY 13270

CANADAY, MAURICE LEWIS FP /CD 055
110 DOCTOR'S PARK AC
LINCOLNTON 28092 704 735-7413

CANDELA, STEPHEN JOSEPH ORS 010
PO BOX 260 AC
SUPPLY 28462 919 754-4355

CANIPE, TOMMIE LEE GS /TS 040
P. O. BOX 5229 AC
HIGH POINT 27262 919 887-3164

CANNON, EUGENE BOLIVIA PD 076
366 LEXINGTON ROAD A L/RT
ASHEBORO 27203 919 625-2460

CANNON, MICHAEL L. 074
330 LINDSAY DR., APT. #1 A S
GREENVILLE 27834 919 355-5492

CANNON, WOODWARD GS 092
2800 BLUE RIDGE BLVD. STE. 305 AC
RALEIGH 27607 919 781-7416

CANTLEY, LARRY KEITH END 034
2933 MAPLEWOOD AVE. * AC
WINSTON-SALEM 27103 919 765-1640

CANUPP, TONY WAYNE EM /IM 049
5722 MAYLANDIA RD. A AC
CHARLOTTE 28269 704 548-0611

CANZANELLO, VINCENT J. NEP 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-6191

CAPIZZI, ROBERT LAWRENCE ON /HEM 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4464
FAX 919 748-4204

CAPOROSSI, PAUL VINCENT OBG 018
RT. #2, BOX 195 AC
CONOVER 28613 704 322-4920

CAPPIELLO, DAVID LAWRENCE ORS 011
129 MCDOWELL STREET AC
ASHEVILLE 28801 704 258-8800
FAX 704 258-0416

CAPPS, RHONDA MARIE EM 074
201 COUNTRY RD. A R
GRIMESLAND 27837 919 551-4184

CARANDANG, NAPOLEON VELUZ IM /OM 041
AT&T TECHNOLOGIES, INC. A AC
P. O. BOX 25000
GREENSBORO 27420 919 279-3627

CARDWELL, JEFFREY GLENN FP 060
1018 ROANOKE AVE. R
CHARLOTTE 28205 704 355-3172

CARDWELL, WILLARD IM /CD 041
2312 LAFAYETTE A L/RT
GREENSBORO 27408 919 288-4740

CARLISLE, RICHARD WRIGHT 026
1601-B OWEN DR. A R
FAYETTEVILLE 28304

CARLOS, RITA QUIAMBAO PD 041
1200 N. ELM ST. A AC
GREENSBORO 27401 919 379-3963

CARLSON, ERIC BARNETT CD /IM 074
EASTERN CARDIOLOGY, P.A. A AC
SUITE 10, MED. PAVILION
GREENVILLE 27834 919 757-1000
FAX 919 757-3045

CARLSON, KENNETH PAUL U 034
2932 LYNDHURST AVE. AC
WINSTON-SALEM 27103 919 765-4021

CARLSON, PHILIP RANDALL R /IM 097
WILKES GENERAL HOSPITAL AC
DEPT. OF RADIOLOGY
N. WILKESBORO 28697 919 651-8400

CARLSTEIN, MARJORIE L. 034
413 YATES CT. #B A S
CHAPEL HILL 27516 919 725-8909

CARLTON, JANIS H. 034
PO BOX 5782 A S
WINSTON-SALEM 27113

CARLTON, RICHARD ALAN CDS 018
420 N. CENTER ST. A AC
HICKORY 28601 704 323-1100

CARLTON, THOMAS KERN, JR. PD 080
720 GROVE STREET AC
SALISBURY 28144 704 636-5576

CARLTON, WILLIAM YARBOROUGH P 034
1115 ENGLEWOOD DR. A AC
WINSTON-SALEM 27106 919 722-9939
FAX 919 768-6328

CARMACK, KEITH K.K. FP 070
4716 N. CROATAN HIGHWAY AC
KITTY HAWK MED. CTR.
KITTY HAWK 27949 919 261-3848

CARMICHAEL, DENNIS D. CHP /P 060
1917 PARK DR. AC
CHARLOTTE 28204 704 372-5238

CARNEY, RODERIC GRIFFIN IM 082
407 BEAMAN STREET C
CLINTON 28328 919 592-1776

CARO, JOSE FRANCISCO END /IM 074
DEPT. OF ENDOCRINOLOGY A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2571

CARPENTER, FREDERICK J., JR. AN 032
BOX 15609 AC
DURHAM 27704 919 470-6186

CARPENTER, SALLY L. PD 051
605 BERKSHIRE RD. AC
SMITHFIELD 27577 919 934-0564

CARPENTER,KENNETH C. GP 014
P. O. BOX 699 AC
LENOIR 28645 704 754-7861

CARR, DAVID RUDDLE
5407 S.W.80TH TERRACE R
GAINESVILLE, FL 32608 904 392-3711

CARR, HENRY JAMES, JR. IM /PUD 082
PO BOX 857 A P * AC
CLINTON 28328 919 592-2964

CARR, JENIFER 034
RR #2, BOX 213 R
BLACKSTONE, VA 23824 804 346-9791

CARR, JOHN FERGUSON, II D 032
1200 BROAD ST. A AC
DURHAM 27705 919 286-7903

CARR, KENT EMERSON IM 064
1051 COUNTRY CLUB DR. A AC
PO BOX 7828
ROCKY MOUNT 27804 919 937-4084

CARR, MARJORIE BARNWELL PD 092
2800 BLUE RIDGE BLVD.,STE. 501 A AC
RALEIGH 27607 919 781-7490

CARR, RAYMOND EDWARD GS /TS 040
624 QUAKER LN., STE. C-101 A AC
HIGH POINT 27262 919 883-1348

CARR, THOMAS ANTHONY GE /IM 060
217 TRAVIS AVE. AC
CHARLOTTE 28204 704 372-3350

CARR, WILLIAM C. PD 082
115 VISTA DR. AC
CLINTON 28328 919 592-6011

CARRASCO, LEONOR C. A 054
PO BOX 1073 AC
1306 N. HERRITAGE
KINSTON 28503 919 523-5461

CARROLL, BARBARA ANNE R 032
4718 HARMONY CHURCH RD. A AC
EFLAND 27243 919 684-2711

CARROLL, CHARLES FISHER, JR. ATP 013
CABARRUS MEMORIAL HOSPITAL A AC
CONCORD 28025 704 788-5987

CARROLL, FRANCIS MURRAY FP /A 024
104 SEVENTH AVENUE AC
CHADBOURN 28431 919 654-3143

CARROLL, WILLIAM WARREN OPH 064
116 N. CIRCLE DRIVE A AC
ROCKY MOUNT 27801 919 443-4145

CARSON, CULLEY CLYDE, III U 032
BOX 3274, DUMC A AC
DURHAM 27710 919 684-2127
FAX 919 684-4611

CARSON, JACK OLIVER FP 074
P. O. BOX 549 AC
GRIFTON 28530 919 524-4463

CARSWELL, JANE TRIPLETT FP 014
P. O. BOX 960 AC
LENOIR 28645 704 754-0541

CARTER, CHRISTINE GAIL 074
RT. #14, BOX 139-C A * S
GREENVILLE 27834 919 758-4471

CARTER, COLEMAN DELYNNE IM 060
217 TRAVIS AVENUE AC
CHARLOTTE 28204 704 372-3350

CARTER, FRANK MOULTON CRS /GS 074
ECU SCHOOL OF MEDICINE A AC
DEPT. OF SURGERY
GREENVILLE 27858 919 551-4171

CARTER, JAMES HARVEY P 032
MENTAL HYGIENE CLINIC A
WOMACK MEDDAC
FT. BRAGG 28307 919 684-6102

CARTER, JAMES WALTER TS /GS 074
905 JOHNS HOPKINS DR. A P * AC
GREENVILLE 27834 919 758-1747
FAX 919 758-6809

CARTER, JEAN W. OBG 092
4420 LAKE BOONE TRAIL,STE. 302 AC
RALEIGH 27607 919 571-1040

CARTER, JOHN JEFFERSON, JR. P /CHP 081
CITY RT. #3, 311 FAIRGROUND RD AC
SPINDALE 28160 704 287-6110

CARTER, LAWRENCE S., JR. 034
300 S. HAWTHORNE RD.,BOX 2602 A S
WINSTON-SALEM 27103 919 727-1422

CARTER, MARGARET FRONEBERGER AN 034
FORSYTH MEMORIAL HOSPITAL AC
3333 SILAS CREEK PARKWAY
WINSTON-SALEM 27103 919 760-5180

CARTER, NEEDHAM BATTLE IM /CD 064
3811 WOODLAWN RD. A L/RT
ROCKY MOUNT 27804 919 977-6746

CARTER, NUMA RICHARDSON, JR. FP 023
512 DIXON BOULEVARD A AC
SHELBY 28150 704 487-7540

CARTER, PHILIPS JOHN ORS 041
PO BOX 14580 A AC
315 W. WENDOVER AVE.
GREENSBORO 27415 919 275-0724

CARTER, RALPH EDWARD, III ORS 083
1604 MEDICAL DR. AC
LAURINBURG 28352 919 276-4611
FAX 919 277-4244

CARTER, ROBERT WILSON IM /CD 001
KERNODLE CLINIC A * AC
BURLINGTON 27217 919 227-3621

CARTER, STEVEN RAYMOND AN 063
PO BOX 2060 A AC
SOUTHERN PINES 28388 919 295-6720

CARTER, TIMOTHY ROBERT PTH 092
4420 LAKE BOONE TRAIL A C
REX HOSPITAL
RALEIGH 27607 919 783-3040

CARTY, BRIAN CLIFFORD 034
703 SNOWBERRY CT., #I S
BALTIMORE, MD 21221 919 765-7147

CASCIO, WAYNE E. CD /IM 032
CB 7075, BURNETT-WOMACK BLDG. AC
CHAPEL HILL 27599

CASE, MICHAEL STEPHEN FP 036
212 GLENWAY BLVD. A P C
BELMONT 27810 919 825-5333

CASERIO, JAMES JOSEPH IM 045
547 N. JUSTICE ST. A AC
HENDERSONVILLE 28739 704 692-5096

CASEY, DENNIS NELSON DR 054
KINSTON CLINIC, NORTH A AC
KINSTON 28501 919 527-7077

CASH, DAVID WAYNE FP 049
310 DAVIE AVE. A AC
STATESVILLE 28677 704 873-3269

CASH, JAMES BUTLER PTH 098
PO BOX 3898 A AC
WILSON 27895 919 399-8156

CASH, TED FREEMON EM 023
RT. #1, BOX 141 AC
SHELBY 28150 704 487-3131

CASHMAN, JOHN U 065
1905 GLEN MEADE ROAD A P AC
WILMINGTON 28403 919 763-6251
FAX 919 763-7408

CASHWELL, LEON FRANKLIN, JR. OPH 034
300 S. HAWTHORNE ROAD AC
WINSTON-SALEM 27103 919 748-4091

CASTELLOE, THOMAS EDISON ORS 092
P. O. BOX 10707 A AC
RALEIGH 27605 919 781-5600

CASWELL, CHRISTOPHER C. AN 008
PO BOX 1121 AC
AHOSKIE 27910 919 332-8121

CATALANO, PHILIP M. D 057
1416 59TH ST. WEST A AC
BRADENTON, FL 34209 813 792-2934

CATES, NADY MILTON, III FP 026
1806 LAKESHORE DR. A AC
FAYETTEVILLE 28305 919 484-0954

CATES, ROBERT CHARLES 041
403 11TH AVE. R
MONROE, WI 53566 608 897-2191

CATHCART, CORNELIUS FITZHAROLD PD 091
1924 RUIN CREEK RD., STE. 101 A
HENDERSON 27536 919 492-9565

CATO, ALLEN EASLEY, JR. PD /PUD 032
4364 S. ALSTON AVE. #201 AC
DURHAM 27713 919 361-2286
FAX 919 361-2290

CATROU, PAUL GREGOIRE CLP 074
ECU SCHOOL OF MEDICINE A AC
DEPT. CLI. PTH, BRODY 1S08
GREENVILLE 27858 919 551-4928

CATTIE, JOHN VINCENT GS /CDS 060
106 E. PHIFER STREET A AC
MONROE 28110 704 289-8528

CATZ, NITZAN DANIEL OTO 051
607 BERKSHIRE RD A AC
SMITHFIELD 27577 919 934-0948

CAUDLE, JOHN ALLEN P 060
1900 RANDOLPH RD., STE. 918 A AC
CHARLOTTE 28207 704 333-7722

CAUDLE, ROBERT J. ORS 092
PO BOX 10707 A AC
RALEIGH 27605 919 781-5600

CAUGHEY, DALE WELLS, JR. IM 065
5305-A WRIGHTSVILLE AVENUE AC
WILMINGTON 28403 919 799-4220

CAUGHRAN, JOHN HAMILTON ORS 060
120 PROVIDENCE ROAD A AC
CHARLOTTE 28207 704 377-0351

CAUSEY, ANDREW JACKSON OPH /OTO 049
210 VALLEY STREAM ROAD L
STATESVILLE 28677 704 873-8337

CAVANAUGH, PATRICK JOSEPH TR 092
NASH DAY HOSPITAL A AC
CURTIS-ELLIS DR.
ROCKY MOUNT 27801 919 783-3018

CAVINESS, VERNE STRUDWICK CD /IM 092
913 VANCE ST. A L/RT
RALEIGH 27608 919 832-4258

CECIL, STEPHEN GERARD AN 096
607 WOODBERRY DR. A AC
GOLDSBORO 27530 919 731-6089

CEDARHOLM, JOHN CARL CD 060
1960 RANDOLPH RD. A AC
CHARLOTTE 28207 704 373-1503
FAX 704 373-1216

CEFALO, ROBERT CHARLES OBG /NPM 032
430 LAKESHORE LANE * AC
CHAPEL HILL 27514 919 966-1601

CEFALU, SALVADOR JOSEPH P /GER 092
DOROTHEA DIX HOSPITAL AC
RALEIGH 27611 919 733-5518

CEIPS, RICHARD NORMAN OPH 007
211 N. MARKET ST. P * AC
WASHINGTON 27889 919 946-2171

CELESTINO, FRANK SAMUEL FP 034
3400 YORK ROAD A AC
WINSTON-SALEM 27104 919 748-2258

CELLA, JOHN ROBERT R 092
PO BOX 19509 * AC
NORTH HILLS STATION
RALEIGH 27619 919 833-1407

CERAME, MARIO A. GS /VS 001
719 HERMITAGE RD. * AC
BURLINGTON 27215 919 226-5191

CERWIN, ROBERT A. NM 092
3821 MERTON DR. A AC
RALEIGH 27609 919 787-7411

CHALFANT, WILLIAM PAXSON GS /CDS 013
56 LAKE CONCORD ROAD, N.E. A AC
CONCORD 28025 704 786-1104

CHALLA, VENKATA RAMANA PTH /NA 034
200 FLINTSHIRE ROAD A AC
WINSTON-SALEM 27104 919 768-0591

CHAMBERLAIN, JACK KENNETH HEM /ON 074
DEPT. OF MEDICINE AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2560

CHAMBERLAIN, STEVEN A. OBG 023
110 W. GROVER ST. A AC
SHELBY 28150 704 487-5258

CHAMBERLIN, HARRIE ROGERS PD 032
1001 ARROWHEAD RD. A L/RT
CHAPEL HILL 27514 919 942-4951

CHAMBERS, DAVID EARL 032
3102 GREEN HILL DR. A R
CHAPEL HILL 27514 919 286-6951

CHAMBERS, JEFFREY ROY P 032
3308 CHAPEL HILL BLVD. R
DUKE FOREST PL. STE. 131
DURHAM 27707 919 490-9787

CHAMBERS, ROBERT EDWARD PD 036
1839 E. GARRISON BOULEVARD AC
GASTONIA 28054 704 864-2685

CHAMBERS, ROBERT TILLMAN PD 034
2786 ROBINHOOD RD. DE
WINSTON-SALEM 27106 919 765-5242

CHAMBLEE, DONALD VANCE FP 060
211 S. SHARON AMITY ROAD A AC
CHARLOTTE 28211 704 366-7586

CHAMBLEE, HUBERT ROYSTER, JR. OPH 092
20 ENTERPRISE STREET AC
RALEIGH 27607 919 829-1948

CHAMBLEE, JOHN SIGMA PH /GPM 064
509 E. CHURCH STREET A L/RT
NASHVILLE 27856 919 459-2223

CHAMBLISS, JOHN RANDOLPH IM 064
24 COUNTRY CLUB DR. A L/RT
ROCKY MOUNT 27804 919 443-9084

CHANCE, JAMES KENNETH OPH 025
802 MCCARTHY BLVD. A AC
NEW BERN 28560 919 633-4183

CHANDLER, ARTHUR CECIL, JR. OPH 032
PO BOX 15249 A
3901 ROXBORO RD.
DURHAM 27704 919 479-4100

CHANDLER, EDGAR TED IM 034
741 HIGHLAND AVE. AC
WINSTON-SALEM 27101 919 727-2097

CHANDLER, GINA GAIL 034
1620 W. FIRST ST., #27 A S
WINSTON-SALEM 27104 919 724-4649

CHANDLER, JOE THURSTON NEP /IM 060
928 BAXTER STREET AC
CHARLOTTE 28204 704 374-1321
FAX 704 334-3061

CHANG, EDWARD J. 034
BOX 198, 300 S. HAWTHORNE RD. S
WINSTON-SALEM 27103 919 724-3288

CHANG, JOHN SHYUEYI OBG 055
112 DOCTORS PARK A AC
LINCOLNTON 28092 704 732-3346

CHANG, YONG DAE 032
2729 N. TRYON ST. #E S
CHARLOTTE 28206 919 968-6974

CHANGAPPA, BADUVANDA U. GS 024
PO BOX 1307 AC
WHITEVILLE 28472 919 642-4711

CHAPLIN, CHARLES HAL PS /GS 060
2215 RANDOLPH ROAD A AC
CHARLOTTE 28207 704 372-6846

CHAPLIN, DON CLARENCE IM /CD 001
KERNODLE CLINIC, INC. A P * AC
BURLINGTON 27217 919 227-3621

CHAPLINSKI, THOMAS JOSEPH ON /HEM 074
1705 W. 6TH ST. AC
GREENVILLE 27834 919 752-6101

CHAPMAN, GEOFFREY SEWALL HEM 060
1350 S. KINGS DR. AC
CHARLOTTE 28207 704 372-8750

CHAPMAN, GREGORY DOUGLAS IM /CD 032
2412 FARTHING ST. R
DURHAM 27704 919 684-8111

CHAPMAN, JESSE PUGH, JR. TS /GS 011
276 KENILWORTH RD. L/RT
ASHEVILLE 28803 704 252-7357

CHAPMAN, ROBERT AMASA FP 006
P. O. BOX 728 AC
BANNER ELK 28604 704 898-4828

CHAPMAN, SHELLEY J. 032
5401 SW 88TH CT. S
GAINESVILLE, FL 32608

CHAPMAN, TODD MASTERS ORS 060
1001 BLYTHE BLVD., #200 A AC
CHARLOTTE 28203 704 373-0544
FAX 704 347-5320

CHARI, RAVI S. 032
BOX 31047, DUMC A R
DURHAM 27710 919 684-8111

CHARLTON, JOHN DAVID A 041
1301 W. WENDOVER AVENUE L
GREENSBORO 27408 919 275-0441

CHARLTON, OLIVER PATRICK DR 092
4420 LAKE BOONE TRAIL AC
RALEIGH 27607 919 755-3023

CHASE, ROBERT EUGENE AN 041
1816 PEMBROKE RD., STE. #2 AC
GREENSBORO 27408 919 272-3720

CHASE, TIMOTHY LEE 034
2126 QUEEN ST., APT. #3 A S
WINSTON-SALEM 27103 919 722-0064

CHATHAM, SCOTT T. OBG 018
PO DRAWER 38 A AC
HICKORY 28603 704 322-4140
FAX 704 322-3767

CHAUDHRY, ABDUL GHAFOOR CDS /GS 092
2800 BLUE RIDGE BLVD. STE. 306 A AC
RALEIGH 27607 919 782-7900

CHAUDHRY, HASHMAT ALI OPH 042
608 JACKSON ST. A AC
ROANOKE RAPIDS 27870 919 537-0522

CHAUDHURI, DEBI PRASAD GS 026
1617 OWEN DRIVE AC
FAYETTEVILLE 28304 919 323-0101

CHEANEY, RUSSELL ALAN AN 023
300 GROVER ST. AC
SHELBY 28150 704 482-5716

CHEEK, GEO. W., JR. GS 001
317 ENGLEMAN A RT
BURLINGTON 27215 919 584-6551

CHEEK, HERMAN BARRETT CD 040
624 QUAKER LANE A AC
HIGH POINT 27262 919 885-6168
FAX 919 885-8523

CHEEK, JOHN MERRITT, JR. GS 032
1414 KENT STREET A L/RT
DURHAM 27707 919 489-1241

CHEELY, GEORGE RAYBURN CD /IM 092
3020 NEW BERN AVE., STE. 420 A AC
RALEIGH 27610 919 833-5111

CHEESBOROUGH, JOHN DAVIDSON D 053
827 S. HORNER BOULEVARD AC
SANFORD 27330 919 775-7926

CHEKAN, GEORGE, JR. AN 013
920 CHURCH ST., NORTH AC
CONCORD 28025 704 786-2111

CHEN, ANTHONY LUNG-TUNG FP 000
33 N. SPRING AVE. #1 R
LAGRANGE, IL 60525 708 482-8231

CHEN, CHIH-CHENG FRANK N 065
1608 WELLINGTON AVENUE A AC
WILMINGTON 28401 919 395-5521

CHEN, JOANNA C. 034
1815 BRANTLEY ST. S
WINSTON-SALEM 27103 919 723-4054

CHEN, KEH-FANG OBG 023
604 W. KING ST. AC
KINGS MOUNTAIN 28086 704 739-8059

CHEN, TONG YONG AN 060
200 HAWTHORNE LN A AC
CHARLOTTE 28204 704 371-4049

CHEN, WILLIAM YOUNGSON P 001
1608 MEMORIAL DR. A AC
GADDY BLDG.

CHENEY, PAUL R., JR. IM /IG 060
10620 PARK RD., STE. 234 A AC
CHARLOTTE 28210 704 542-1952
FAX 704 542-0720

CHERRY, JEAN MICHELE 032
805-A W. MAIN ST. S
CARRBORO 27510 919 968-1822

CHERRY, WILLIAM RICHARD 032
DUMC, DEPT. OF ANES. R
DURHAM 27710 919 848-6011

CHESCHEIR, NANCY C. OBG 032
UNC, 214 MACNIDER BLDG. AC
DIV. MATERNAL-FETEL MED.
CHAPEL HILL 27599 919 966-1601

CHESHIRE, WILLIAM P., JR. 032
106-A WEATHERSTONE DR. A R
CHAPEL HILL 27514 919 966-2526

CHEWNING, SAMUEL JACKSON, JR. ORS 060
1001 BLYTHE BLVD., #200 A AC
CHARLOTTE 28203 704 372-9820

CHI, HONG YUP FP 018
105 N. MAIN AVENUE A AC
NEWTON 28658 704 464-5424

CHIARAMONTI, ALEXANDER D 092
101 CARY PKWY. SW, #210 A * AC
CARY DERMATOLOGY CTR.
CARY 27511 919 467-8556

CHIAVETTA, STEPHEN V. PTH /HEM 092
4420 LAKE BOONE TRAIL A * AC
RALEIGH 27607 919 783-3040

CHIKES, PETER GEORGE OTO 013
34 ARDSLEY AVE., NE A P AC
CONCORD 28025 704 782-2166

CHILDERS, MELVIN DAVIS, JR OPH 060
1928 RANDOLPH RD., STE. 109 AC
CHARLOTTE 28207 704 372-3070

CHILDERS, TERRY CELY PD 011
131 MCDOWELL ST. AC
ASHEVILLE 28801 704 254-9811

CHILES, NOAH HAMPTON IM 040
PO BOX 22548 L/RT
HILTON HEAD ISLAND, SC 29925 919 882-3911

CHIPLEY, PATRICK LINCOLN GP 011
P. O. BOX 399 AC
ENKA 28728 704 667-2531

CHIPMAN, MARTIN N 026
1262 OLIVER ST. AC
FAYETTEVILLE 28304 919 484-5151

CHITWOOD, WALTER R., JR. CDS /TS 074
ECU SCHOOL OF MEDICINE A AC
CARDIAC SURG., ROOM 235
GREENVILLE 27858 919 551-4822

CHIU, ARVA YAHUA 034
1625 NORTHWEST BLVD. A S
WINSTON-SALEM 27104 919 777-8680

CHIULLI, RICHARD ALLEN GS 063
PO BOX 2000 AC
1 MEMORIAL DR.
PINEHURST 28374 919 295-0260

CHOI-CHUNG, MOON SOOG PM 050
131 ASHEVILLE HWY. * AC
1 EASTGATE CTR.
SYLVA 28779 704 586-7448

CHOI, SAN HO GS 056
8 RIVERVIEW ST., STE. 202 A * AC
FRANKLIN 28734 704 524-7464

CHOKSI, JANAK KANTILAL ON /IM 001
405 RUDD ST. B AC
BURLINGTON 27215 919 226-0276

CHOONG, HAN PYO GS 002
P. O. BOX 548 A AC
503 THIRD STREET, SW
TAYLORSVILLE 28681 704 632-7467

CHRISTAKOS, ARTHUR CHRIS GYN 032
BOX 2976, DUMC A AC
DURHAM 27710 919 684-4647
FAX 919 684-8666

CHRISTENBURY, JONATHAN DAVID OPH/PS 060
1900 RANDOLPH RD. STE. 706 A P * AC
CHARLOTTE 28207 704 332-9365
FAX 704 332-6372

CHRISTENSEN, FRANK HOWARD OPH /PS 032
109 CONNER DR., STE. 2207 A AC
CHAPEL HILL 27514 919 933-1294
FAX 919 933-9153

CHRISTENSEN, HARVEY EARL GS /TS 018
ROUTE #2, BOX 190 AC
CONOVER 28613 704 322-9105

CHRISTENSON, WAYNES NELS PTH 060
3536 TALWYN CT. AC
CHARLOTTE 28269 704 355-2251

CHRISTIANSON, DANA J. OPH 088
LOOKING GLASS EYE CTR. A AC
BLDG. #2, MEDICAL PARK DR.
BREVARD 28712 704 884-7320

CHRISTIE, JOHN DOYLE PTH 074
DEPT.OF CLI.PTH/DIAGNOSTIC MED A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-5988

CHRYSLER, CHARLES OTIS FP 060
3894 E. INDEPENDENCE BLVD. A AC
CHARLOTTE 28205 704 537-5424

CHRYSTAL, GLENN STUART TR /ATP 041
604 WALTER REED DR. AC
GREENSBORO 27403 919 294-2670

CHU, H. WILLY GS 043
700 TILGHMAN DR. A AC
DUNN 28334 919 892-1550

CHUNG, HONG-YILL GP 067
407 CARMEN AVENUE P AC
JACKSONVILLE 28540 919 353-2800

CHUNG, IL WHAN U 050
1 EASTGATE COURT * AC
SYLVA 28779 704 586-7446

CHUNG, JOSEPH YANGSOO GS /GP 059
1200 MEDICAL COURT A AC
MARION 28752 704 652-5818

CHUNG, WAN SOO FP 007
320 MCCASKEY ROAD AC
WILLIAMSTON 27892 919 792-1071

CHUNG, ZUN SUB FP /EM 040
2926 S. MAIN STREET A AC
HIGH POINT 27263 919 434-3118

CHURCH, C. FRANKLIN FP /D 092
1109 DRESSER COURT * AC
RALEIGH 27609 919 872-4900

CHURCH, JACK LEE R /IM 012
BROUGHTON HOSPITAL AC
MORGANTON 28655 704 433-2256

CHWALS, WALTER J. PDS 034
278 WEST VIEW DR. A AC
WINSTON-SALEM 27104 919 748-4502

CILIBERTO, SAMUEL DAVID ORS 053
101 S. VANCE STREET AC
SANFORD 27330 919 776-0551

CILOGLU, FIGEN 041
MOSES H. CONE HOSPITAL R
GREENSBORO 27401 919 379-3900

CINTRON, RUBEN 034
300 S. HAWTHORNE RD. S
MED. STUDENT, BOX 336
WINSTON-SALEM 27103 919 773-1564

CIPPERLY, VAUGHAN ROBERT HEM /ON 011
80 VICTORIA RD. AC
ASHEVILLE 28801 704 258-0994
FAX 704 258-2622

CISZEK, THOMAS ARTHUR NPM /PD 026
PO BOX 2000 AC
FAYETTEVILLE 28302 919 323-6762

CITRIN, KERRY ALAN GS 029
105 PINEYWOOD ROAD A AC
P. O. BOX 1187
THOMASVILLE 27360 919 475-7148

CITRON, DAVID SANFORD IM /FP 060
8117 RISING MEADOW RD. A L/RT
CHARLOTTE 28277 704 542-0608

CLANCY, THOMAS V. GS /TRS 065
2131 S. 17TH ST. AC
WILMINGTON 28402 919 343-0161

CLAPP, CHRISTOPHER RANDOLPH 034
1919 ACADEMY ST., APT. 19 A S
WINSTON-SALEM 27103 919 750-0801

CLAPP, JAMES ROBERT IM /NEP 032
BOX 2991, DUMC A AC
DURHAM 27710 919 684-6674

CLARK, CAROLYN ANN 032
400 ALEXANDER AVE. #2A A S
DURHAM 27705 919 286-4194

CLARK, CHARLES E. 074
301 HOUNDS TOOTH CT. A S
WINTERVILLE 28590 919 752-1887

CLARK, CHARLES EDWARD, III OTO /RHI 032
2609 N. DUKE ST. STE. 306 AC
DURHAM 27704 919 471-8700

CLARK, DOUGLAS HENDON GS 078
295 WEST 27TH STREET L/RT
LUMBERTON 28358 919 739-4615

CLARK, DOUGLAS WINSTON PD 032
2609 N. DUKE ST., STE. 801 A AC
DURHAM 27704 919 477-3434

CLARK, FRANKLIN ST. CLAIR GS /CDS 026
PO BOX 53394 AC
FAYETTEVILLE 28305 919 323-2626

CLARK, GEORGE THOMAS, III GS 074
ECU SCHOOL OF MEDICINE C
DEPT. OF SURGERY
GREENVILLE 27858 919 551-4667

CLARK, HENRY VONDELL 074
330 LINDSAY DR. #9-G A * S
GREENVILLE 27834 919 355-7133

CLARK, JOHN BLUE, JR. EM /IM 060
3830 SILVERBELL DR. A AC
CHARLOTTE 28211 704 371-4160

CLARK, KENNETH JAMES, JR. GE /IM 011
49 MCDOWELL ST. A P AC
ASHEVILLE 28801 704 258-3870
FAX 704 253-5945

CLARK, LEE ANDREW, JR. OPH 098
WILSON CLINIC A * AC
WILSON 27893 919 291-7001

CLARK, LOUIS PHILLIP, JR. HS /ORS 026
1300 MEDICAL DR. A AC
FAYETTEVILLE 28304 919 484-2171

CLARK, MARGARET ANNE IM 034
250 CHARLOIS BOULEVARD AC
WINSTON-SALEM 27103 919 768-4730

CLARK, MICHAEL EMIL 034
1227 EBERT ST. A S
WINSTON-SALEM 27103 919 942-1975

CLARK, RICHARD LEE DR 032
901 PHILS CREEK RD. AC
CHAPEL HILL 27516 919 966-4400

CLARK, RICHARD STROEBE GS 062
506 WOOD ST. A AC
TROY 27371 919 572-3737

CLARK, THEODORE RUST P /ALD 063
PO BOX 56 A AC
SOUTHERN PINES 28387 919 692-6471

CLARK, TIMOTHY J. DR 074
324 DUPONT CIR. AC
GREENVILLE 27858 919 551-4485

CLARK, VIVIAN E. OBG 032
120 CONNER DR., STE. 101 AC
PO BOX 3317
CHAPEL HILL 27514 919 942-8571

CLARK, WILLIAM GILMER FP 060
1921 BEVERLY DR. AC
CHARLOTTE 28207 704 371-4160

CLARK, WILLIAM DOUGLAS 074
106 SCALES PL, APT. B-1 A S
GREENVILLE 27834 919 355-5126

CLARK, WILLIAM MACKEY R 060
647 LLEWELLYN PLACE AC
CHARLOTTE 28207 704 384-4056

CLARKE-PEARSON, DANIEL L. OBG 032
BOX 3079, DUMC AC
DURHAM 27710 919 684-3765

CLARKE, THOMAS LAWRENCE OBG 034
501 N. CLEVELAND AVENUE AC
WINSTON-SALEM 27101 919 722-3874

CLARKE, WILLIAM LOWE, JR FP 018
551 THIRD ST. NE A L/RT
HICKORY 28601 704 327-4441

CLASSEN, CHARLES HENRY, JR. ORS 054
KINSTON CLINIC, NORTH, STE. F A AC
KINSTON 28501 919 522-2020

CLAXTON, CALVIN PORTER, JR. CDS /TS 011
257 MCDOWELL STREET A P AC
ASHEVILLE 28803 704 258-1121

CLAYTON, MELVIN LOUIS IM /FP 008
PO BOX 788 A AC
AHOSKIE 27910 919 332-2993

CLAYTON, TAWANDA BOWDEN OBG 078
403 W. 27TH A AC
LUMBERTON 28358 919 739-2846

CLEARY, JIM RAY EM /IM 063
900 MONTICELLO DR. AC
PINEHURST 28374 919 692-3644

CLEAVER, H. DEHAVEN GS /TS 064
469 SPRINGFIELD RD. L
ROCKY MOUNT 27801 919 443-9084

CLEEK, JOHN BROOKS IM 060
10512 PARK RD., EXT. STE. 201 A AC
CHARLOTTE 28210 704 542-6593

CLEGG, HERBERT WILLIAM, II PD /ID 060
2711 RANDOLPH RD. STE. 501 A AC
CHARLOTTE 28207 704 374-1747

CLEMENT, JAMES EDWIN GYN 074
101 BETHESDA DRIVE A AC
GREENVILLE 27834 919 758-4181

CLENDENINN, NEIL J. ON /IM 032
5910 TREETOP RIDGE AC
DURHAM 27705 919 248-4436
FAX 919 248-8384

CLEVELAND, CRAWFORD H., JR. IM /AI 074
ECU SCHOOL OF MEDICINE A R
SECT. ALLERGY AND IMMUNOLOGY
GREENVILLE 27858 919 551-3424

CLIFTON, PHILLIP MAX P /CHP 034
SALEM PSYCHIATRIC ASSOC. A AC
190 CHARLOIS BLVD.
WINSTON-SALEM 27103 919 768-6930

CLINE, DAVID MARTIN EM 074
ECU SCHOOL OF MEDICINE A AC
ASSISTANT PROFESSOR,BRODY 4W54
GREENVILLE 27858 919 551-2954
FAX 919 551-2224

CLINE, JAMES ALEXANDER GS /EM 064
WELLONGATE 2-D RT
3430 SUNSET AVE.
ROCKY MOUNT 27804 919 443-6444

CLINE, JOHN WILLIAM OPH 032
1110 W. MAIN STREET AC
DURHAM 27701 919 682-9341

CLINE, KATHLEEN ANN EM 074
305 NANTUCKET CT. A AC
WINTERVILLE 28590 919 321-2277

CLINE, ROBERT SEITZ FP 053
801 STUART DR. A * S/RT
SANFORD 27330 919 774-6685

CLINE, WAYNE ALLEN U 080
909 W. HENDERSON STREET L/RT
SALISBURY 28144 704 633-9441

CLINE, WAYNE ALLEN, JR. U 080
909 W. HENDERSON STREET A AC
SALISBURY 28144 704 633-9441

CLINE, WILLIAM TUCKER GS /VS 092
3400 EXECUTIVE DRIVE A AC
RALEIGH 27609 919 876-2732

CLINTON, HOWARD LESLIE, JR. FP /EM 045
PO BOX 1477 AC
HENDERSONVILLE 28793 704 697-6991

CLIPPINGER, FRANK WARREN, JR. ORS 032
BOX 3935, DUMC A AC
DURHAM 27710 919 684-4229

†**CLONINGER, CHARLES EDGAR** FP 018
9674 RIVIERA DR. A
DECEASED--11-18-90
SHERRILLS FORD 28673 704 478-3155

CLONINGER, GILES LATHERN, JR. FP 077
115 MAIN STREET A L
HAMLET 28345 919 582-1319

CLONINGER, KENNETH LEE, JR. NS 041
200 E. NORTHWOOD ST., STE. 504 AC
GREENSBORO 27401 919 272-4578

CLONINGER, ROWELL CONNOR GS 023
309 WESTFIELD RD. A L/RT
SHELBY 28150 704 487-8591

CLONINGER, TIMOTHY EARL TR 060
SOUTHEAST RADIATION ONC. GP A AC
421-D S. SHARON-AMITY RD.
CHARLOTTE 28211 704 338-2272

CLOUTIER, MICHAEL R 040
1017 SHAMROCK RD. AC
HIGH POINT 27265 919 887-1926

CLUTTS, GEORGE ROBERT GS /TS 041
277 N. PARK DR. L/RT
GREENSBORO 27401 919 275-9554

CLYDE, WALLACE ALEXANDER, JR. PD /ID 032
535 BURNETT-WOMACK BLDG. AC
UNC, CB #7220
CHAPEL HILL 27599 919 966-2331

COBB, GREGORY WAYNE OPH 067
264 MEMORIAL DRIVE AC
JACKSONVILLE 28546 919 353-1030

COBEY, WILLIAM GRAY PD 060
2024 RANDOLPH ROAD AC
CHARLOTTE 28207 704 375-4453

COBO, LIONEL MICHAEL OPH 032
BOX 3802, DUKE EYE CTR. A AC
DURHAM 27710 919 684-3799

COCHRAN, W. GERALD PS 080
410 MOCKSVILLE AVE. A * AC
SALISBURY 28144 704 633-8561

CODINGTON, JOHN BONNELL GS 065
624 FOREST HILLS DR. A L/RT
WILMINGTON 28403 919 763-6289

CODY, EDMUND JOSEPH 074
#9 COUNTRY MANOR APTS, S
B'S BARBEQUE RD.
GREENVILLE 27834 919 782-1215

CODY, RICHARD F., JR. 000
260 WILDBERRY LN. R
NASHVILLE, TN 37209 615 356-7586

COFFEE, CHARLES CREED AN 032
BOX 3094, DUMC R
DURHAM 27710 919 681-2924

COFFER, BERTRAM WATTS AN 092
P.O. BOX 18139 A * AC
2800 BLUE RIDGE RD. STE. 204
RALEIGH 27619 919 781-7420

COGGESHALL, ALLAN BANCROFT GS 041
109 BEVERLY PLACE A L/RT
GREENSBORO 27403 919 299-7190

COGGIN, JAMES MICHAEL 032
1212 CAVINESS DR. S
SANFORD 27330 919 775-3242

COHEN, ARTHUR R. PTH 060
200 HAWTHORNE RD. A AC
PRESBYTERIAN HOSPITAL
CHARLOTTE 28204 704 384-4814
FAX 704 334-0926

COHEN, DANIEL MICHAEL 74
ECU A AC
GREENVILLE 27858 919 551-4822

COHEN, KENNETH LEE OPH 032
UNC DEPT. OF OPH, CB #7040 A * AC
617 CLINICAL SCI BLDG.
CHAPEL HILL 27599 919 966-5296

COHEN, MYRON SCOTT ID 032
UNC,547 BURNETT-WOMACK, 229-H AC
CHAPEL HILL 27599 919 966-2536

COHEN, NORMAN ALLEN AN 076
1421 LAURA CT. A C
ASHEBORO 27203 919 625-5151

COIN, JAMES THADDEUS N 065
1515 DOCTOR'S CIRCLE A AC
WILMINGTON 28401 919 763-5182
FAX 919 762-9419

COLAVITA, PAUL G. IM /CD 060
1001 BLYTHE BLVD. STE. 300 A AC
CHARLOTTE 28203 704 373-1507

COLE, THOMAS BALLARD PH /PD 032
PO BOX 27687 * AC
RALEIGH 27611 919 733-3222

COLE, TOLLIE BOYCE OTO 032
BOX 3805, DUMC A AC
DURHAM 27710 919 684-6819

COLEMAN, CLARENCE C., JR. 032
810 DELANY DR. A S
RALEIGH 27610 919 821-5705

COLEMAN, ELIZABETH ANNE P 065
5016 CLEAR RUN DR. A AC
WILMINGTON 28403 919 763-9517

COLEMAN, GORDON DONALD PD 065
1920 S. 16TH ST. A * AC
WILMINGTON 28401 919 763-2072

COLEMAN, JAMES BARR GS 007
PO BOX 696 AC
WASHINGTON 27889 919 946-0181

COLEMAN, LESTER L., JR. FP 018
P. O. BOX 376 A L
HILDEBRAN 28637 704 397-3522

COLEMAN, PHILIP DIVOLL GS /TS 007
625 E. 12TH ST. AC
WASHINGTON 27889 919 946-0181

COLEMAN, RALPH EDWARD NM 032
DUMC, DEPT. OF RADIOLOGY A AC
DURHAM 27710 919 681-2711
FAX 919 681-5636

COLES, DEBRA LYNN IM 060
2616 PARK RD. #F A R
CHARLOTTE 28209 704 355-2000

COLEY, SILAS BODIE, JR. P /N 032
815 KENMORE ROAD AC
CHAPEL HILL 27514 919 929-0326

COLLAWN, THOMAS HERBERT AN 060
1901 RANDOLPH RD. A AC
CHARLOTTE 28207 704 366-5311

COLLETT, BOBBIE ANN, PHD PTH 034
3740-A MOSS DR. A R
WINSTON-SALEM 27106 919 748-2649

COLLETT, JAMES ROUNTREE IM /CD 012
312 W. UNION ST. A L/RT
MORGANTON 28655 704 437-2712

COLLEY, JAMES OSCAR, III GS 011
M-105 DOCTORS BLDG. A AC
ASHEVILLE 28801 704 253-1529
FAX 704 253-1458

COLLIER, ALBERT MILFORD PD /ID 032
UNC 535 CLI. SCI. BLDG.CB 7220 AC
CHAPEL HILL 27599 919 966-2331

COLLIER, ROBERT FP /IM 024
104 7TH AVE. AC
CHADBOURN 28431 919 654-3143

COLLIGAN, JOSEPH FRANCIS P /CHP 067
1703 COUNTRY CLUB A AC
JACKSONVILLE 28546 919 353-4165

COLLIN, CHARLES F. GS 060
1350 S. KINGS DR. AC
CHARLOTTE 28207 704 372-8750

COLLINGS, GILBEART H., JR. OM /PM 000
5533 NATOMA DR.
FT. MYERS, FL 33907

COLLINS, CHARLES DAVID GS 086
1008 OLD ROCKFORD ST. AC
MT. AIRY 27030 919 786-9430

COLLINS, DAVID DUTROW PUD /CC 034
3001 LYNDHURST AVE. A AC
WINSTON-SALEM 27103 919 765-0888
FAX 919 768-1737

COLLINS, DONALD MICHAEL 034
4755 COUNTRY CLUB RD. A S
APT. 110-G
WINSTON-SALEM 27104 919 659-8997

COLLINS, FRANCIS FARRELL, JR. IM /PUD 063
205 PAGE RD. AC
PINEHURST 28374 919 295-5511

COLLINS, STEPHEN F. FP /OM 065
RIEGELWOOD MEDICAL CTR. * AC
BOX 98
RIEGELWOOD 28456

COLLINS, WARREN JAMES GYN 023
105 GROVER STREET AC
SHELBY 28150 704 482-2486

COLLINS, WILLIAM STUART P 034
3969 QUILLING ROAD A AC
WINSTON-SALEM 27104 919 765-7350

COLLMAN, MITCHELL SCOTT CD /IM 092
PO BOX 17569 AC
RALEIGH 27619 919 783-5273

COLSON, JOSEPH SAMPSON FP 039
PO BOX 459 A L/RT
OXFORD 27565 919 693-2697

COLSON, LACY ALSTON IM /FP 092
23-G SUNNYBROOK ROAD AC
RALEIGH 27610 919 821-5201

COLTON, SHARON ANN IM /EM 055
PO BOX 1566 AC

COMBS, JOHN GILBERT, JR. R 065
2318 BLYTHE ROAD A P AC
WILMINGTON 28403 919 259-5451

COMBS, JOSEPH JOHN IM /PUD 092
218 SPRINGMORE DR. A L/RT
RALEIGH 27615 919 848-7218

COMPEAU, PHILLIP E. C. IM 097
1710 PARKWOOD DR., SOUTH SUITE * AC
WILKESBORO 28697 919 667-1285

COMPTON, JOHN WALLACE R 096
2700 MEDICAL OFFICE PLACE L/RT
GOLDSBORO 27530 919 734-1866

COMPTON, KENNETH W. OTO 060
3535 RANDOLPH RD., STE. 210 AC
CHARLOTTE 28211 704 365-0711

CONARD-CORKEY, ELIZABETH M. PH /GPM 060
519 HERMITAGE COURT A L
CHARLOTTE 28207 704 375-7831

CONARD, DAVID LLOYD IM 060
101 W. T. HARRIS BLVD. C-101 AC
CHARLOTTE 28213 704 547-1462

CONDIE, SCOTT DOUGLAS FP 023
1198 WYKE ROAD AC
SHELBY 28150 704 487-1148

CONIGLIO, GERALD ANTHONY ORS 055
202 LINCOLN MEDICAL PARK AC
LINCOLNTON 28092 704 732-1496

CONLEY, MARTIN JAMES, JR. CD /IM 065
1515 DOCTOR'S CIRCLE AC
WILMINGTON 28401 919 763-5182

CONNELL, GEORGE FREDERICK AN 098
6905 OCEAN DR. AC
EMERALD ISLE 28594 919 291-1700

CONNELLY, JERRY HUBBARD GP /GPM 041
212-C W. WENDOVER AVE. AC
GREENSBORO 27401 919 275-3828

CONNER, JOEL DEWITT GYN 036
571 COX RD. A AC
GASTONIA 28054 704 865-0033

CONNOLLY, INGEBORG VICTORIA 034
532 POLO ROAD A S
WINSTON-SALEM 27106 919 759-3439

CONRAD, ELIZABETH PD 034
1862 RUNNYMEADE RD. A L/RT
WINSTON-SALEM 27104 919 723-1213

CONRAD, LARRY LEE EM 033
PO BOX 7178 C
TARBORO 27886

CONROY, ROBERT JOHN 034
1704 GALES CT. S
WINSTON-SALEM 27103 919 722-6501

CONTOGIANNIS, MARY ANN GS 034
3529 SPICEBUSH TRAIL A R
GREENSBORO 27410 919 748-2011

COOK, BRIAN FP 041
1116 CLEBURNE ST. A R
GREENSBORO 27408 919 272-6995

COOK, CHARLES ALVIN NEP /IM 092
3392 SIX FORKS RD. AC
RALEIGH 27609 919 872-8550

COOK, DONALD EUGENE, JR. FP 090
808 CIRCLE DR. AC
UNION FAMILY PRACTICE, PA
MONROE 28112 704 289-5443

COOK, FIONA JACKSON IM 074
DEPT. OF MEDICINE AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4633

COOK, JAMES HOSMER D 011
281 MCDOWELL STREET A AC
ASHEVILLE 28803 704 252-5679

COOK, JOHN EDMUND AN 070
PO BOX 96 A P AC
CAMDEN 27921 919 338-1542

COOK, JOSEPH WILLIAM TS /CDS 060
1001 BLYTHE BLVD. #300 A AC
CHARLOTTE 28203 704 373-1500

COOK, LELAND JAMES GS 018
415 N. CENTER ST., STE. 102 A AC
HICKORY 28601 704 327-9178

COOK, PAUL P. IM /ID 074
DEPT. OF MEDICINE AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858

COOK, RUSSEL CLIFFORD PD 007
608 E. 12TH STREET P AC
WASHINGTON 27889 919 946-4134

COOK, WESLEY ALLEN, JR. NS 032
DUMC, DIV. OF NEURO-SURGERY A AC
DURHAM 27710 919 684-3582

COOK, WILLIAM EUGENE FP /PUD 026
325 N. COOL SPRING ST. #104 A L/RT
FAYETTEVILLE 28301 919 484-5321

COOKE, JAMES HARBIN, JR. IM 013
130 LAKE CONCORD RD. A AC
CONCORD 28025 704 782-3114

COOKE, RALPH MCBRIDE GP /GER 086
631 ELK SPUR ST. A L/RT
ELKIN 28621 919 835-5544

COONRAD, RALPH WOODWARD ORS /HS 032
1828 HILLANDALE ROAD A AC
DURHAM 27705 919 286-1249

COOPER, EDWIN BRANAN, JR. ORS /PM 054
KINSTON CLINIC NORTH A P AC
DOCTOR'S DR.
KINSTON 28501 919 522-2020
FAX 919 522-0795

COOPER, HERBERT A. PHO /CLP 032
UNC, CB #7220 AC
BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-1178

COOPER, LYLE RAY IM 025
702 NEWMAN RD. AC
PO BOX 2554
NEW BERN 28560 919 633-5333

COOPER, MILES ROBERT ON /HEM 034
300 S. HAWTHORNE ROAD A AC
WINSTON-SALEM 27103 919 748-4300
FAX 919 748-6416

COOPER, TIM ERVIN, JR. IM /PUD 060
RANDOLPH ROAD IM ASSOC. AC
1900 RANDOLPH RD., #812
CHARLOTTE 28207 704 366-8240

COOPER, WILLIAM CORNELIUS, JR. PD 064
124 FOY DRIVE AC
ROCKY MOUNT 27801 919 443-4031

COOPERBERG, CHARLES I. IM /NEP 032
2609 N. DUKE ST. STE. 604 A AC
DURHAM 27704 919 477-3005

COPE, BRIAN SCOTT 034
506 TRENT CT. A S
CLOISTER OAKS
WINSTON-SALEM 27127 919 650-1709

COPELAND, DANA DERWARD PTH /NA 092
10004 GRADY CIRCLE A AC
RALEIGH 27609 919 755-8260

COPELAND, DONALD LEE FP 060
19607 HIGHWAY 73 AC
DAVIDSON 28036 704 892-3723

COPELAND, GARY BENJAMIN OPH 026
1629 OWEN DRIVE A * AC
FAYETTEVILLE 28304 919 484-6141

COPPEDGE, THOMAS OLIVER, JR. R 060
4067 ABINGDON RD. L/RT
CHARLOTTE 28211 704 366-0504

COPPRIDGE, ALTON JAMES U 032
3605 RUGBY RD. L/RT
DURHAM 27707 919 286-1297

CORBIN, LISA W. 032
201 HOWELL ST., APT. 1B S
CHAPEL HILL 27514 919 942-3909

CORBIN, RICHARD PRESLEY IM /PUD 060
PO BOX 32861 AC
CAROLINAS MEDICAL CENTER
CHARLOTTE 28232 704 355-3165

CORCORAN, EDWIN EMMONS IM /GE 011
49 MCDOWELL ST. A L/RT
ASHEVILLE 28801 704 258-3870

CORDELL, A. ROBERT CDS /TS 034
BOWMAN GRAY SCH. OF MED. A AC
WINSTON-SALEM 27103 919 748-4672

CORLEY, MALCOLM OSBOURNE DR 050
ROUTE #1, BOX 391 AC
SYLVA 28779 704 586-6371

CORNISH, MARY HELD P 032
706 E. FOREST HILLS BLVD. AC
DURHAM 27707 919 682-9296

CORNWALL, THOMAS PAUL PYA /CHP 092
4601 LAKE BOONE TRAIL #2A AC
RALEIGH 27607 919 782-4954

CORNWELL, SARAH BYRD FP 032
3116 N. DUKE ST. AC
DURHAM 27704 919 493-8651

CORPENING, ALBERT NEWTON FP 092
141 E. MAIN ST. AC
PO BOX 158
YOUNGSVILLE 27596 919 556-2126

CORPENING, JOSEPH DURHAM PD 080
720 GROVE STREET AC
SALISBURY 28144 704 636-5576

CORRELL, EARL EUGENE GP 013
KANNAPOLIS MEDICAL CLINIC A P AC
KANNAPOLIS 28081 704 933-2101

CORT, CAROLYN RAY PD 061
P. O. BOX 188 AC
BURNSVILLE 28714 704 682-6912

COSGROVE, KENNETH EDWARD IM /CD 045
510 7TH AVENUE, WEST A * L
HENDERSONVILLE 28739 704 692-2231

COSTENBADER, WM. B., JR. OTO /HNS 011
131 MCDOWELL STREET A AC
ASHEVILLE 28801 704 254-3517

COSTNER, JAMES M. 074
113 E. 12TH ST. A S
GREENVILLE 27834 919 757-3217

COTTEN, AARON RODNEY 074
108-B CEDAR CT. S
GREENVILLE 27858 919 757-0571

COTTER, DANIEL T. AN 036
2122 SHANNON DR. A AC
GASTONIA 28054 704 866-2825

COTTLE, RONALD WADE FP 024
118 E. WALTER ST. AC
WHITEVILLE 28472 919 642-2706
FAX 919 642-6146

COTTRELL, WILLIAM MILNES AN 013
84 LAKE CONCORD RD. NE #F A * AC
CONCORD 28025 704 786-2111

COUGHLIN, PAUL WM. FITZHENRY U 040
624 QUAKER LN. STE. E-100 * AC
HIGH POINT 27262 919 886-5151

COUNCELL, RICHARD BRUCE OBG 011
120 W. ANNEX A AC
DOCTORS BLDG.
ASHEVILLE 28801 704 252-1050

COUNCIL, ALBERT BARBEE, JR. FP 079
701 S. VAN BUREN ROAD AC
EDEN 27288 919 623-1514

COUNCIL, JOHN CROMARTIE, JR. PD 060
427 N. WENDOVER RD. AC
CHARLOTTE 28211 704 364-3740

COUNDOURIOTIS, ANDREW 032
1408 WASHINGTON ST. A R
DURHAM 27701 919 683-2785

COURIE, MAURICE NICKOLA GYN 092
3145 ESSEX CIRCLE AC
RALEIGH 27608 919 782-3698

COURREGE, MARY LOU D 065
3208 OLEANDER DR. A AC
WILMINGTON 28403 919 763-7333

COURTS, ANDREW JOHNSON CHP /P 041
1024 PROFESSIONAL VILLAGE A AC
GREENSBORO 27401 919 272-4262

COUTURE, MARK MOSCOE GS /TS 036
902 COX RD. STE. G A AC
GASTONIA 28054 704 864-6011

COVINGTON, CONNELL PD /GP 092
100 SUNNYBROOK RD. STE. 202 AC
RALEIGH 27610 919 821-3180

COWAN, LEON KERR D 098
WILSON DERM. CLINIC, PA A AC
702 BROAD ST.
WILSON 27893 919 291-5600

COWAN, ROBERT JENKINS NM /R 034
2869 FAIRMONT ROAD A AC
WINSTON-SALEM 27106 919 748-4932

COWHERD, DAVID MCLELLAN CD 063
PO BOX 3000 AC
MOORE REGIONAL HOSP.
PINEHURST 28374 919 295-7882

COX, ALEXANDER MCNEIL GP 079
325 S. MARKET STREET A L/RT
MADISON 27025 919 548-2240

COX, RAYMOND L. OBG 041
WOMENS HOSP. OF GREENSBORO A AC
801 GREEN VALLEY RD.
GREENSBORO 27408 919 379-3641

COX, RONNIE LEWIS IM /CD 040
624 QUAKER LANE AC
HIGH POINT 27262 919 841-6711

COX, RUSSELL JACKSON PD 036
902 COX RD. STE. C A AC
GASTONIA 28052 704 864-6522

COX, STANLEY CULLEN, III OTO 063
205 CREST ROAD A AC
SOUTHERN PINES N C 28387 919 295-6831

COX, STEPHEN HAMPTON FP /A 053
2208 BROOKWOOD TRAIL AC
SANFORD 27330 919 258-6521

COX, WILLIAM FOSCUE IM /GPM 034
3740 KIRKLEES ROAD A L/RT
WINSTON-SALEM 27104 919 765-2626

COXE, JAMES SHERWOOD, III END /IM 092
3410 EXECUTIVE DRIVE A AC
RALEIGH 27609 919 876-7692

COYLE, ALICE REGINA ORS 084
PO BOX 1636 A AC
313 YADKIN ST.
ALBEMARLE 28002

CRABTREE, DANIEL WAYNE FP 074
EASTERN CAROLINA FAM.PRAC.CTR. AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-5457

CRACKER, ANDREW J. OBG 000
12 NICHOLAS AVE. A R
DANVILLE, PA 17821 717 275-8828

CRACKER, ANDREW ROBERT OBG 065
1809 GLEN MEADE ROAD A AC
WILMINGTON 28401 919 763-9833

CRADDOCK, LARRY WAYNE OBG 060
449 N. WENDOVER RD. AC
CHARLOTTE 28211 704 364-3760

CRAFT, PATRICK P. 074
124 N. EASTERN ST. S
GREENVILLE 27858 919 830-3974

CRAIGE, ERNEST L/RT 032
235 MOUNT BOLUS
CHAPEL HILL, NC 27514

CRAIG, ISAAC ALAN PTH 054
LENOIR MEMORIAL HOSPITAL P * AC
KINSTON 28501 919 522-7141

CRAIG, SANDRA ANNE EM 060
4741 #2-G HEDGEMORE DR. AC
CHARLOTTE 28209 704 355-3181

CRAIN, BARBARA JEAN NA /ATP 032
106 FOXRIDGE COURT A AC
CHAPEL HILL 27514 919 684-5963
FAX 919 684-6514

CRAIN, JACK LEE GYN /END 060
1901 BRUNSWICK AVE. AC
CHARLOTTE 28207 704 338-3149
FAX 704 343-3428

CRAN, WENDY LEE 034
339 CRAFTON ST., #4 A S
WINSTON-SALEM 27103 919 777-0823

CRANDALL, ROBERT GORDON P 060
1900 RANDOLPH RD. STE. 900 A AC
CHARLOTTE 28207 704 333-7722

CRANE, GEORGE WILLIAM, JR. D 032
1200 BROAD STREET A L
DURHAM 27705 919 286-7903

CRANE, JEFFREY MAJOR IM /HEM 092
4420 LAKE BOONE TRAIL A AC
RALEIGH 27612 919 781-7070

CRANE, LARRY MARTIN DR 032
3905 DARBY RD. AC
DURHAM 27707 919 470-5289

CRANE, STEVEN DOUGLAS FP 045
PO BOX 5151 AC
HENDERSONVILLE 28739 704 693-4289

CRANZ, OSCAR WILLIAM GS 054
1605 DUBOSE DR. A L/RT
PO BOX 1316
KINSTON 28501 919 523-3677

CRAVEN, DALLAS CLIFFORD, JR. GS 060
2104 RANDOLPH ROAD AC
CHARLOTTE 28207 704 377-3900

CRAVEN, FREDERICK THORNS GP 013
P. O. BOX 185 A L/RT
CONCORD 28025 704 782-2710

CRAVEN, NICHOLAS SCOTT FP /P 029
123 EASTSIDE DR. AC
LEXINGTON 27292 704 246-2253

CRAVEN, THOMAS, JR. ORS 065
2001 S. 17TH STREET AC
WILMINGTON 28401 919 763-7344

CRAVEN, WILLIAM JAMES 000
2015 BRUCKNER BLVD., APT. 1L A R
BRONX, NY 10473 212 829-0281

CRAWFORD, JOHN LITTLEFIELD,III OPH 045
1701 OLD VILLAGE ROAD A AC
HENDERSONVILLE 28739 704 693-1773
FAX 704 692-3297

CRAWFORD, JOHN ROBERT, III OPH 080
310 N. MAIN STREET A P AC
SALISBURY 28144 704 633-7542

CRAWFORD, JOHN THOMAS FP 060
6900 FARMINGDALE DR. C
CHARLOTTE 28212 704 536-1362
FAX 704 563-1601

CRAWFORD, LARRY CLARKE GS /TS 001
316 N. GRAHAM-HOPEDALE RD. A AC
BURLINGTON 27217 919 227-3621

CRAWFORD, MICHAEL D. OTO 064
PO BOX 7099 AC
ROCKY MOUNT 27804 919 937-4100
FAX 919 937-0571

CRAWFORD, ROBERT CECIL, JR. OBG 040
P. O. BOX 5543 AC
HIGH POINT 27262 919 889-5422

CRAWFORD, ROBERT ORR, JR. OPH 033
101 CLINIC DR. A AC
TARBORO 27886 919 823-8295

CREDLE, WILLIAM FRONTIS, JR. PUD /IM 065
1202 MEDICAL CENTER DRIVE AC
WILMINGTON 28401 919 763-8251

CREECH, JOSEPH JAN IM 051
707 LASSITER ST. AC
SMITHFIELD 27577 919 934-0212

CREEDON, TARA AILEEN 034
5856 OLD OAKRIDGE RD. APT. 414 A S
GREENSBORO 27410 919 668-9486

CREGAN, GREGG EDWARD ORS /HS 034
BOX 25007 A AC
1425 PLAZA DR.
WINSTON-SALEM 27114 919 768-1270

CREIGHTON, ROBERT KILGO OBG /LM 065
6442 SHINNWOOD RD. AC
WILMINGTON 28409 919 350-0006

CRESSY, ELIZABETH D. 032
106-B MISTY WOODS CIR. A S
CHAPEL HILL 27514 919 942-3401

CREWS, DAVID ALLEN AN 041
3915 E. HAZEL LANE AC
GREENSBORO 27408 919 299-6343
FAX 919 632-1250

CREWS, HARRY DENNISTON NEP /IM 011
10 MCDOWELL STREET A AC
ASHEVILLE 28801 704 258-8545

CREWS, JENNIE ROBERTSON 032
2800 UNIVERSITY DR. R
DURHAM 27707 919 684-8111

CRIADO, ENRIQUE 032
304 FORBUSH MT. DR. R
CHAPEL HILL 27514 919 966-4131

CRIGLER, NORRIS WOLF, JR. R 011
P. O. BOX 2959 AC
ASHEVILLE 28801 704 254-4617

CRISP, GREGORY H. AN 001
PO BOX 2317 A AC
BURLINGTON 27216 919 584-4006

CRISP, SELLERS LUTHER ORS 074
622 MEDICAL DR. A AC
GREENVILLE 27834 919 752-4613

CRISSMAN, CLINTON SAMUEL FP 001
219 E. ELM STREET A L
GRAHAM 27253 919 226-2448

CRISSMAN, MARK ANDERS FP 001
214 E. ELM ST. AC
GRAHAM 27253 919 226-2448

CRIST, TAKEY OBG 067
200 MEMORIAL DRIVE A AC
JACKSONVILLE 28546 919 353-2115
FAX 919 353-0126

CRITTENDEN, SUSAN LAWRENCE IM 092
103 BAINES CT. AC
CARY 27511 919 467-6125

CROCKER, DANIEL LIND ON /HEM 064
100 NASH MEDICAL ARTS MALL AC
ROCKY MOUNT 27801 919 443-9084

CROFT, JAMES MORRIS FP 012
P. O. DRAWER 849 A AC
MORGANTON 28655 704 437-9401
FAX 704 437-5985

CROMARTIE, WILLIAM JAMES IM /ID 032
204 WEAVER RD. A L/RT
GLENDALE
CHAPEL HILL 27514 919 942-3493

CROMO, SANDRA ANN FP 032
318 PINE TREE VILL. #123 R
WEST MIDDLESEX, PA 16159 412 983-3870

CROMPTON, JOHN DAVID 034
300 S. HAWTHORNE RD. A R
WINSTON-SALEM 27103 919 748-2011

CRONLAND, MURPHY ALAN GP 055
P. O. BOX 488 AC
LINCOLNTON 28092 704 735-3048

CROOK, JAMES LESTER GS 013
56 LAKE CONCORD RD., N.E. C
CONCORD 28205 704 786-1104

CROOK, JOHN NEWMAN GS /VS 013
56 LAKE CONCORD ROAD A AC
CONCORD 28025 704 786-1104

CROOM, ARTHUR BASCOM R 040
1311 ROBIN HOOD RD. A L/RT
HIGH POINT 27260 919 882-6057

CROOM, DORWYN WAYNE, II PTH 012
2201 S. STERLING ST. AC
MORGANTON 28655 704 438-2255

CROOM, ROBERT DEVANE, III GS 032
UNC SCHOOL OF MEDICINE A AC
DEPT. OF SURGERY, CB 7210
CHAPEL HILL 27599 919 966-4416
FAX 919 966-2898

CROSBY, EDWARD BROWN ORS /HS 011
PO BOX 1980 A AC
ASHEVILLE 28802 704 258-0847

CROSBY, IVAN KEITH CDS /TS 034
2827 LYNDHURST AVE., #205-A A AC
WINSTON-SALEM 27103 919 768-9510

CROSKERY, RICHARD WILLIAM IM 074
1705 W. 6TH ST., BLDG. E A * AC
GREENVILLE 27834 919 752-6101

CROSLAND, DAVID BAILEY OBG 013
1054 BURRAGE ROAD, N. E. A AC
CONCORD 28025 704 788-4151

CROSS, ALMON RUFUS OBG 040
414 HILLCREST DRIVE A L/RT
HIGH POINT 27262 919 884-1236

CROSS, ROBERT VANDERVOORT GYN 040
P. O. BOX 5128 L/RT
HIGH POINT 27262 919 887-3011

CROSSLEY, JAMES JOHN OTO /A 041
100 E. NORTHWOOD ST. A AC
GREENSBORO 27401 919 274-5441

CROUNSE, ROBERT GRIFFITH D /PH 074
RT. #2, BOX 263-T A P AC
BLOUNTS CREEK 27814 919 551-2030

CROUSE, JOHN ROBERT, III IM 034
BOWMAN GRAY SCH. OF MED. AC
300 S. HAWTHORNE ROAD
WINSTON-SALEM 27103 919 748-2674
FAX 919 748-6734

CROW, JIMMIE RAY GS /VS 064
1041 NOELL LN., STE. 102 A AC
ROCKY MOUNT 27804 919 443-0026

CROW, JOHN BUREN FP 023
600 CROW RD. A L/RT
SHELBY 28150 704 487-7052

CROW, LAURA LOMAX D 041
1030 PROF. VILLAGE AC
GREENSBORO 27401 919 966-4131

CROW, SAMUEL LESLIE IM /CD 011
4 CROWFIELD DR. #F A L/RT
ASHEVILLE 28803 704 252-5633

CROWDER, MARY THELMA OBG 060
150 PROVIDENCE RD. AC
CHARLOTTE 28207 704 377-0461

CROWE, JAMES EARL DR 086
2915 BITTING RD. A AC
WINSTON-SALEM 27104 919 789-9541

CROWE, JOHN ALBERT, JR GS 086
HOOTS MEM. HOSPITAL A AC
BOX 68
YADKINVILLE 27055 919 689-3111

CROWELL, CHARLES CARLOS, III CD /IM 040
624 QUAKER LN., STE. 103-C A AC
HIGH POINT 27262 919 885-6168
FAX 919 885-8523

CROWELL, GILES FRANKLIN N 034
201 EXECUTIVE PARK BLVD. AC
WINSTON-SALEM 27103 919 768-6347
FAX 919 760-9393

CROWELL, GORDON CAMERON IM 055
RT. #9, BOX 999 A AC
LINCOLNTON 28092 704 735-1430

CRUMLEY, CHARLES EDWIN IM 055
P. O. BOX 1309 AC
LINCOLNTON 28093 704 735-3081

CRUMMIE, ROBERT GWINN P /ALD 026
1500 BRAGG BLVD. * AC
PO BOX 35436
FAYETTEVILLE 28303 919 484-3304

CRUMPLER, JAMES FULTON PD 064
1409 W. HAVEN BLVD. A L
ROCKY MOUNT 27803 919 442-1523

CRUMPLER, RANDALL SCOTT FP 092
1005 VANDORA SPRINGS RD. AC
GARNER 27529 919 779-1440

CRUTCHER, KENNETH L. FP /EM 014
RT. #1, BOX 134-B AC
HUDSON 28638 919 728-2019

CRUTCHFIELD, ANDREW JACKSON IM /CD 034
2240 CLOVERDALE AVE., STE. 93 A L
WINSTON-SALEM 27103 919 725-5669

CRUTCHFIELD, WILLIAM MONROE OTO /PS 070
1134 N. ROAD STREET AC
ELIZABETH CITY 27909 919 335-2923

CRUTCHLEY, WILLIAM F., JR. GS 070
1134 N. ROAD STREET A AC
ELIZABETH CITY 27909 919 338-3909

CRUZ, CORAZON SAMODIO R /GP 055
ROUTE #2, BOX 310 AC
LINCOLNTON 28092 704 435-4586

CRUZ, JULIA MARGARITA ON 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-2075

CUBBERLEY, CHARLES LAMB, JR. FP 098
P. O. BOX 95 A L/RT
WILSON 27894 919 243-4638

CUELLAR, JOHN PATRICK, III OBG 011
143 ASHELAND AVE. A AC
ASHEVILLE 28801 704 253-2240

CUENCA, NELIDA ALBA PD /PH 026
6748-B IRON GATE DR. A AC
FAYETTEVILLE 28306

CULLEN, PETER PATRICK IM 034
250 CHARLOIS BOULEVARD AC
WINSTON-SALEM 27103 919 768-4730

CULLOM, JOSEPH WILLIAM GS 040
624 QUAKER LN., STE. 200-C AC
PO BOX 5229
HIGH POINT 27262 919 887-3164

CULP, JOHN HARRY, JR. GYN 060
401 S. SHARON AMITY ROAD AC
CHARLOTTE 28211 704 365-0110

CULPEPPER, FRED CARROLL, III PD 060
427 N. WENDOVER RD. AC
CHARLOTTE 28211 704 333-6659

CULTON, JULIAN CLARK OPH 060
1600 E. THIRD STREET A AC
CHARLOTTE 28204 704 372-3300

CULTON, YANCEY GOELET, JR. GYN 032
2609 N. DUKE ST. STE. 503 AC
DURHAM 27704 919 471-6832

CUMMINGS, CHARLES EMMETT D 011
281 MCDOWELL STREET A AC
ASHEVILLE 28803 704 252-5676

CUMMINGS, RICHARD EDWARD PS 054
2508 N. QUEEN STREET AC
KINSTON 28501 919 523-7082

CUMMINS, LARRY E. P /CHP 067
192 VILLAGE DR. AC
JACKSONVILLE 28540 919 353-4165

CUNNINGHAM, PAUL R. G. GS 074
DEPT. OF SURGERY, BRODY BLDG. A AC
ECU SCH. OF MED. ROOM 4S-10
GREENVILLE 27858 919 551-2620
FAX 919 551-5775

CUNNINGHAM, ROBERT R. OBG 076
350 N. COX ST., #6 A AC
ASHEBORO 27203 919 626-6371

CURL, KENNETH FRANK PD /IM 075
720 HOSPITAL DR. A AC
COLUMBUS 28722 704 894-3016

CURL, WALTON WRIGHT ORS 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4207

CURLING, OTIS D., JR. NS 034
3725 OLYMPIA DR. A R
WINSTON-SALEM 27104 919 748-2011

CURNES, JOHN TAYLOR R /NR 041
PO BOX 13005 A AC
GREENSBORO RADIOLOGY ASSOC.
GREENSBORO 27415 919 379-4140

CURRIE, DONALD PATRICK U 034
PO BOX 24369 A AC
WINSTON-SALEM 27114 919 768-0735

CURRIN, JAMES MITCHELL, JR. FP 083
515 LAUCHWOOD DRIVE A AC
LAURINBURG 28352 919 276-1340

CURRIN, JOE BADGETT, JR. IM 092
500 N. ENNIS STREET AC
FUQUAY-VARINA 27526 919 552-2275

CURTIS, KAREN ELIZABETH 074
I-3 DOCTORS PARK APTS. A S
GREENVILLE 27834 919 758-6480

CURTIS, RICHARD FRANKLIN R /NM 014
PO BOX 659 A * AC
LENOIR 28645 704 757-5205

CUTCHIN, JOSEPH HENRY, JR. GP 018
P. O. BOX 67 A L
8303 SHERRILLS FORD RD.
SHERRILLS FORD 28673 704 478-2431

CUTCHIN, LAWRENCE MCGILBRA IM /PD 033
RT. #3, BOX 325 A P * AC
TARBORO 27886 919 823-2105

CUTSON, TONI MICHELE FP /GER 032
BOX 3003, DUMC R
DURHAM 27710 919 286-6932

CYKERT, SAMUEL IM 001
711 HERMITAGE ROAD A AC
BURLINGTON 27215 919 229-9254

CZERMAK, CHARLES LOUIS, JR. DR 095
P. O. BOX 1781 AC
BOONE 28607 704 264-6984

CZOP, CAROL L. 032
RT. #3, BOX 199-9 A S
APEX 27502

D'AVANZO, NICHOLAS JOSEPH PD 092
3124 BLUE RIDGE RD. AC
RALEIGH 27612 919 782-0021

D'ALESSANDRO, DONALD F. ORS 060
1001 BLYTHE BLVD., #200 A AC
CHARLOTTE 28203 704 373-0544

D'LUGIN, JAY JEFFREY 034
3421 OLD VINEYARD RD. #C-34 S
WINSTON-SALEM 27103 919 768-2093

D'SOUZA, VINCENT J. R 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4435

DACKO, DOUGLAS MITCHELL DR 053
2634 WELLINGTON DR. A AC
SANFORD 27330 919 775-2234

DACUS, ROBERT MABRY, III OBG 029
1302 LEXINGTON AVENUE A AC
THOMASVILLE 27360 919 475-6139

DAESCHNER, CHARLES WILLIAM,III PD 074
ECU SCHOOL OF MEDICINE A AC
288 W. PCMH
GREENVILLE 27858 919 551-4676

DAHNERS, LAURENCE E. ORS 032
237 BURNETT-WOMACK BLDG. A AC
CB 7055, UNC
CHAPEL HILL 27599 919 966-2039
FAX 919 966-6730

)AILY, REBECCA SUSAN **032**
UNC, DEPT. OF CHILD PSYCHIATRY R
CHAPEL HILL 27599 919 966-2127

)AINER, PAUL M. **HEM /ON 074**
DEPT. OF HEMATOLOGY/ONCOLOGY AC
ECU SCH. OF MED 3E-106 BRODY
GREENVILLE 27858 919 551-2560
FAX 919 551-3149

)ALE, FREDERICK PAYNE **GS 054**
P. O. BOX 1316 A L/RT
KINSTON 28501 919 522-1626

)ALE, GROVER CLEVELAND **IM 096**
3293 RANDY ROAD A L
LANCASTER, PA 17601 717 898-8033

)ALEY, JOHN GILBERT **OBG /END 065**
2143 ECHO LANE AC
WILMINGTON 28403 919 343-0161

)ALEY, MICHAEL BERNARD **IM 063**
PINEHURST MEDICAL CLI. * AC
205 PAGE RD.
PINEHURST 28374 919 295-5511

)ALLAM, DEBORAH LYNN **P 036**
1371 E. GARRISON BLVD., STE. B AC
GASTONIA 28054 704 853-0074

)ALLDORF, FREDERIC GILBERT **PTH /ATP 032**
308 WOODHAVEN RD. AC
CHAPEL HILL 27514 919 966-4541

)ALTON, ALVIN STANLEY, JR. **PD /NPM 011**
50 DOCTORS DR. 304-M AC
ASHEVILLE 28801 704 253-1998

)ALTON, BENNIE BOOKER **GP 076**
8117 BLUE HERON DR. E. A L/RT
APT. A-105
WILMINGTON 28405 919 686-7817

)ALTON, HORACE MILTON **OPH 054**
KINSTON CLINIC, NORTH A L/RT
KINSTON 28501 919 522-1611

)ALTON, JAMES D., JR. **032**
15 MEADOWBROOK DR. A R
DURHAM 27712 919 684-8111

)ALY, JAMES KEARNEY **DR /P 054**
2711 WESTBROOKE DR. * AC
KINSTON 28501 919 522-3443

)ALY, JOHN T. **PTH /FOP 032**
P. O. BOX 15337 A AC
DURHAM 27704 919 477-6742

)ALY, LIAM N. **P /FPY 026**
1262 OLIVER ST. AC
FAYETTEVILLE 28304 919 484-5151

)AMBECK, ALLYN BENARD **EM 082**
312 FOX LAKE DRIVE A AC
CLINTON 28328 919 592-8511

)AMERON, THOMAS BARKER, JR. **ORS 092**
P. O. BOX 10707 A * AC
RALEIGH 27605 919 781-5600

)ANFORD, JERRY LEE **GYN 032**
PO BOX 15249 AC
3901 ROXBORO RD.
DURHAM 27704 919 479-4100

)ANIEL, CROWELL TURNER, JR. **OBG 026**
1914 WINTERLOCHEN RD. * L/RT
FAYETTEVILLE 28305 919 484-9472

)ANIEL, JOHN THOMAS, JR. **GS 032**
415 DUNSTAN STREET A P * AC
DURHAM 27707 919 682-7378

)ANIEL, LOUIE SAMUEL **FP 039**
124 PINE CONE DRIVE A L/RT
OXFORD 27565 919 693-6735

)ANIEL, LOUIS BROADDUS, JR. **ORS 063**
PINEHURST SURGICAL CLINIC A AC
PINEHURST 28374 919 295-1042

)ANIEL, THOMAS BRANTLEY **U 092**
110 SELMA RD. A L/RT
PO BOX 845
WENDELL 27591 919 365-5550

)ANIEL, THOMAS MANNING **PD 051**
501 SELMA RD. AC
PO BOX 568
SMITHFIELD 27577 919 934-7123

)ANIEL, WALTER EUGENE **AN 092**
312 BUNCOMBE STREET A AC
RALEIGH 27609 919 832-7988

)ANIELS, CHARLES A. **PTH 096**
DEPT. OF PATHOLOGY AC
PO BOX 8001
GOLDSBORO 27533 919 735-1530
FAX 919 734-3293

DANIELS, KAREN ELAINE **FP 008**
PO BOX 628 AC
WINDSOR 27983 919 794-3216

DANIS, MARION **IM /CCM 032**
UNC DEPT. OF MEDICINE AC
5025-A OLD CLINIC BLDG.
CHAPEL HILL 27599 919 966-2276
FAX 919 966-6630

DANOFF, JASCHA WOLSEY **CHP /P 074**
DEPT. OF PSYCHIATRY A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2660

DANSIE, KIM DUNCAN **P 034**
1783 POLO ROAD A R
WINSTON-SALEM 27106 919 768-2430

DARDEN, BRUCE VAIDEN, II **ORS 060**
2600 E. 7TH ST. A AC
CHARLOTTE 28204 704 372-9820

DARDEN, JAMES LEE, JR. **FP 008**
ACADEMY ST., MED. ARTS BLDG. AC
AHOSKIE 27910 919 332-3548

DARIEN, DANA VANESE **032**
501 JONES FERRY, W-11 S
CARRBORO 27510 919 942-2374

DARKES, LEROY SCOTT **IM 092**
3100 DURALEIGH RD. C
RALEIGH 27612 919 881-5422

DARSIE, JAMES LEIGH **OTO 014**
MULBERRY MEDICAL PARK AC
LENOIR 28645 704 754-2464

DASCOMB, HARRY EMERSON **IM /ID 092**
6723 FALCONBRIDGE RD. A AC
CHAPEL HILL 27514 919 250-8520

DASHER, GEORGE ALBERT **U 060**
1333 ROMANY ROAD A P AC
CHARLOTTE 28204 704 372-5180

DATTILO, JEFFERY **074**
P.O. BOX 2152 * S
GREENVILLE 27836 919 975-6851

DAUGHERTY, HARRY KARRICK **CDS /TS 060**
1001 BLYTHE BLVD. #300 AC
CHARLOTTE 28203 704 373-1500

DAUGHERTY, JANICE ELAINE **FP /GER 074**
DEPT. OF FAM. MED. BRODY 4N-78A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2601

DAUGHTRIDGE, CLAY C., JR. **IM /CD 063**
PINEHURST MEDICAL CLI. AC
205 PAGE ROAD
PINEHURST 28374 919 295-5511

DAUGHTRIDGE, TRUMAN GIFFIN **R 008**
706 WOODLAWN DRIVE A AC
AHOSKIE 27910 919 332-8121

DAUM, CATHERINE ANNE **IM 065**
1202 MEDICAL CENTER DR. AC
WILMINGTON 28401 919 341-3422

DAVANT, CHARLES, III **FP /GER 095**
RT. #2, BOX 5, CHESTNUT DR. * AC
BLOWING ROCK 28605 704 295-3116

DAVANT, CHARLES, JR. **FP /OPH 095**
P. O. BOX 8 A L
BLOWING ROCK 28605 704 295-3116

DAVID, IVAN **CDS 065**
1912 TRADD COURT AC
WILMINGTON 28401 919 762-7070

DAVIDIAN, VARTAN AMBAR, JR. **PS /GS 092**
1112 DRESSER COURT A AC
RALEIGH 27609 919 872-2616
FAX 919 872-2771

DAVIDSON, ANDREW **OPH 025**
802 MCCARTHY BLVD. A AC
NEW BERN 28560 919 633-4183

DAVIS-SANDERS, BEVERLY ANN **R 026**
605 LEVENHALL DR. AC
FAYETTEVILLE 28303 919 323-2012

DAVIS, ALONZO JAMES, IV **074**
RT. #2, BOX 669 S
GREENVILLE 27858 919 355-2783

DAVIS, ANDREW CALVIN **OPH 012**
335 E. PARKER RD. AC
MORGANTON 28655 704 433-6220

DAVIS, COURTLAND HARWELL,JR. **NS 034**
2525 WARWICK RD. L/RT
WINSTON-SALEM 27104 919 723-7296

DAVIS, DANIEL WHITAKER **FP 004**
402 MORVEN ROAD A AC
WADESBORO 28170 704 694-2129

DAVIS, DWIGHT GROOME, JR. **GS /TS 092**
5825 MAPLE RIDGE RD. AC
RALEIGH 27609 919 876-3671

DAVIS, EDWARD LANGSTON **IM /CD 034**
1809 HATTIE CIRCLE A RT
WINSTON-SALEM 27105 919 723-4864

DAVIS, GEORGE EDWARD **PD 074**
1800 W. 5TH ST., STE. 8 A AC
GREENVILLE 27834 919 758-1750

DAVIS, GEORGE THOMAS **OBG 076**
230 FOUST STREET AC
ASHEBORO 27203 919 625-6128

DAVIS, GLENN MILLER **PS 092**
4301 LAKE BOONE TR., STE. 205 AC
RALEIGH 27607 919 881-0077

DAVIS, JACK BEASON **P 001**
1946 MARTIN STREET AC
BURLINGTON 27215 919 228-0581

DAVIS, JAMES ALEXANDER **EM 034**
1028 VERNON AVE. R
WINSTON-SALEM 27106 919 748-2011

DAVIS, JAMES EVANS **GS /TS 032**
2609 N. DUKE ST., STE. 402 A P * L
DURHAM 27704 919 471-8439

DAVIS, JAMES HOWELL **CDS /TS 092**
2800 BLUE RIDGE BLVD., STE 306 A AC
RALEIGH 27607 919 782-7900

DAVIS, JAMES NORMAN **N 032**
V. A. MEDICAL CTR., NEUROLOGY AC
DURHAM 27705 919 286-6956
FAX 919 286-4662

DAVIS, JEFFERSON U. **PS 032**
UNC, MEDICAL SCHOOL WING D AC
CB #7195
CHAPEL HILL 27599 919 966-4446

DAVIS, JOHN D., JR. **FP /GER 095**
P. O. BOX 8 AC
BLOWING ROCK 28605 704 295-3116

DAVIS, JOHN PERRY, JR. **034**
447 LAWNDALE DR. A R
WINSTON-SALEM 27104 919 748-2011

DAVIS, JOHN PRESTON **IM 034**
329 BANBURY ROAD A L/RT
WINSTON-SALEM 27104 919 768-5390

DAVIS, JOHN WOODROW **FP 018**
24 SECOND AVENUE, N. E. L
HICKORY 28601 704 328-2231

DAVIS, JUNIUS WEEKS, JR. **PD /PH 025**
2107 AMHURST BLVD. L/RT
BERNE VILLAGE, APT. 6C
NEW BERN 28561 919 637-6367

DAVIS, MICHAEL LEE **IM 025**
PO BOX 2566 A AC
NEW BERN 28561 919 224-4591

DAVIS, NELSON PARKE, II **GS /CDS 098**
1700 S. TARBORO STREET A AC
WILSON 27893 919 399-2200

DAVIS, PHILIP BIBB **GS 041**
1125 GATEHOUSE RD. A L
HIGH POINT 27260 305 276-6779

DAVIS, PHILIP COLEMAN **OBG 011**
93 VICTORIA ROAD A * AC
ASHEVILLE 28801 704 253-4821

DAVIS, RHONDA H. **FP 051**
706 WILKINS ST. AC
SMITHFIELD 27577 919 934-5149

DAVIS, ROBERT ALDEN **GS 008**
BERTIE MEMORIAL HOSPITAL AC
WINDSOR 27983 919 794-4865

DAVIS, ROBERT D., JR. **032**
BOX 31212, DUMC R
DURHAM 27710 919 684-5449

DAVIS, ROBERT LEE **DR /NM 004**
515 CAMDEN ROAD A P AC
WADESBORO 28170 704 694-3597

DAVIS, ROBERT NICHOLAS **D 041**
600 WALTER REED DRIVE AC
GREENSBORO 27403 919 294-6555

DAVIS, RONALD L., III **U 041**
200 E. NORTHWOOD ST., STE. 520 A AC
GREENSBORO 27401 919 275-6115

DAVIS, RUFUS JACKSON **GP 036**
32 LAKE DR. A L/RT
BELMONT 28012 704 825-8266

DAVIS, THOMAS R. **OBG 023**
110 W. GROVER ST. A C
SHELBY 28150 704 487-5258

DAVIS, TIMOTHY EUGENE GS /CRS 041
1317 N. ELM ST., STE. #5 A AC
GREENSBORO 27401 919 274-8444

DAVIS, WALTER ETCHELLS ON /HEM 032
PO BOX 15249 A AC
3901 N. ROXBORO RD.
DURHAM 27704 919 479-4100

DAVIS, WAYNE EDWARD U 034
504 FORSYTH MEDICAL PARK AC
WINSTON-SALEM 27103 919 765-4882

DAVIS, WILLIAM HERSEY, JR. ADL /PD 034
723 N. STRATFORD RD. L/RT
WINSTON-SALEM 27104 919 724-3312

DAVISON, REBECCA JANE 032
610 NORTH ST., APT. A S
PORTSMOUTH, VA 23704

DAW, JEFFREY RICHARD 032
211 WILDBERRY LN. S
NASHVILLE, TN 37209

DAWKINS, HOWARD GARRETT, JR. PS /GS 074
2577 STANTONSBURG ROAD A AC
GREENVILLE 27834 919 752-1406
FAX 919 752-0835

DAWSON, ROBERT EDWARD OPH 032
512 SIMMONS STREET L/RT
DURHAM 27701 919 682-7175

DAY, EUGENE DAVIS, JR. FP 039
104 NEW COLLEGE ST. AC
OXFORD 27565 919 693-8126

DAY, JAMES WILLIAM IM 034
3310 BROOKVIEW HILLS BLVD.#203 AC
WINSTON-SALEM 27103 919 765-9631

DAY, PHILIP MARK GP 023
217 N. MAIN ST. AC
PO BOX 520
GROVER 28073 704 937-7905

DE BOER, JOHN L. GS 026
521 BEAUMONT RD. A AC
FAYETTEVILLE 28304 919 483-5031

DE'AK, WILLIAM RALPH PD 032
6350 QUANDRANGLE DR. AC
CHAPEL HILL 27514 919 490-8717

DE CASTRO, CARLOS M, III IM 032
BOX 3934, DUMC R
DURHAM 27710 919 684-3725

DE FILIPP, GARY J. R 060
CHARLOTTE RADIOLOGY C
PO BOX 36937
CHARLOTTE 28236 704 365-0343

DE LA GARZA, CARLOS A. FP 018
24 SECOND AVE., NE A AC
HICKORY 28601 704 328-2231

DE LISSIO, MICHAEL G. GE 092
101 S. W. CARY PARKWAY AC
CARY 27511 919 469-1858

DE MARNEFFE, FRANCIS P 092
3019 FALSTAFF RD. A * AC
RALEIGH 27610 919 250-7000

DE WEESE, GARY KENNETH IM /CD 032
3813 ZENITH PL. R
DURHAM 27705 919 684-8111

DE-LA-TORRE, ERNESTO ESTEBAN NS 034
2825 LYNDHURST AVE. A AC
WINSTON-SALEM 27103 919 765-3750

DEALY, DARILYN HEDDEN ID /IM 011
445 BILTMORE CTR., STE. 500 AC
ASHEVILLE 28801 704 258-9635

DEAN, CLAYTON CLEWIS GS /VS 095
702 STATE FARM RD. AC
BOONE 28607 704 264-2340

DEAN, DEWEY LEVAN, JR. 025
2000 NEUSE BLVD. AC
NEW BERN 28560 919 633-8058

DEAN, ELIZABETH ANNE IM 060
125 BALDWIN AVE. A AC
CHARLOTTE 28204 704 338-6300

DEAN, GREGORY SCOTT 032
11-B TARAWA TERRACE S
DURHAM 27705 919 821-0171

DEAN, JOAN C. B. 034
1227 MARTIN ST. A AC
WINSTON-SALEM 27103 919 659-8202

DEAN, JOHN NEWELL IM 011
147 ASHLAND AVENUE A AC
ASHEVILLE 28801 704 258-1188

DEAN, RICHARD HENRY GS /VS 034
300 S. HAWTHORNE RD. A AC
DEPT. OF SURGERY
WINSTON-SALEM 27103 919 748-4443

DEANG, CEDRIC RODRIGUEZ GS 029
1300 LEXINGTON AVENUE AC
THOMASVILLE 27360 919 475-2376

DEANGELIS, WASHINGTON J. FP /DIA 032
1001 S. HAMILTON ROAD AC
CHAPEL HILL 27514 919 968-4551
FAX 919 929-0763

DEAN, GREGORY SCOTT 032
11-B TARAWA TERR. A S
DURHAM 27705 919 821-0171

DEANS, WILLIAM RONALD, JR. N 064
PO BOX 7187 A AC
2412 PROFESSIONAL DR.
ROCKY MOUNT 27804 919 443-0041

DEANTONIO, HARRY JAMES CD /IM 074
SECTION OF CARDIOLOGY AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-5395

DEARAUJO, WILLIAM 034
1812 OAKCREST CT. R
WINSTON-SALEM 27106 919 659-8107

DEAS, DAVID JOHN P 036
239 WILMOT DR. A P AC
GASTONIA 28054 704 867-2338

DEATON, HUGO L. GS /TS 018
415 N. CENTER ST., STE. 102 A AC
HICKORY 28601 704 327-9178

DEATON, JEFFREY LYNN OBG/REN 034
300 S. HAWTHORNE RD. AC
DEPT. OF OB-GYN
WINSTON-SALEM 27103 919 748-2368
FAX 919 748-3713

DEATON, PHILIP CARL NS 041
200 E. NORTHWOOD ST., STE. 504 A AC
GREENSBORO 27401 919 379-0077
FAX 919 748-3713

DEATON, PLEASANT PAUL GS 012
PO BOX 700 A AC
VALDESE 28690 704 874-0555

DEBECK, THOMAS WADE N 065
29 SANDY PLACE A AC
WILMINGTON 28405 919 686-7522

DEBNAM, GEORGE CLYDE GP /OBS 092
524 S. BLOUNT STREET A AC
RALEIGH 27601 919 832-1667

DEBOGORSKI, JOZEFA PM 074
DEPT. OF PHYSICAL MED.REHAB. A AC
PO BOX 6028
GREENVILLE 27834 919 551-4440

DEBOT, HEIDI MARIA 034
1527 NORTHWEST BLVD. A S
WINSTON-SALEM 27103 919 724-1673

DECILLES, THOMAS A. FP 078
119 N. FLORENCE ST. AC
MAXTON 28364 919 844-5253

DECLERCK, PAUL ALBERT FP 054
2503 N. QUEEN STREET A AC
KINSTON 28501 919 522-3717

DEEKENS, STEWART ANDREWS, JR. FP 012
2203 S. STERLING ST. A AC
MORGANTON 28655 704 437-0666

DEEPE, ROBERT GS 054
1300 COUNTRY CLUB DR. AC
KINSTON 28501 919 537-6525

DEERING, TIMOTHY BRADFORD GE /IM 011
30 CHOCTAW STREET P AC
ASHEVILLE 28801 704 254-0881

DEES, JANET LEE 074
J7 DOCTORS PARK APTS. S
BEASLEY DR.
GREENVILLE 27834 919 752-2497

DEES, JOHN ESSARY U 032
DUKE HOSPITAL A L/RT
DURHAM 27710 919 684-6928

DEES, JOHN TYLER FP /PH 065
ST. HELENA RD. A P * AC
PO BOX 815
BURGAW 28425 919 259-5171

DEES, SUSAN COONS PDA /PD 032
BOX 2913, DUMC A L/RT
DURHAM 27710 919 489-5263

DEESE, JOSEPH EARL EM 078
RT. #3, BOX 130-C AC
MAXTON 28364 919 738-6441

DEFRANZO, ANTHONY JOHN PS 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-450

DEFREITAS, JUNIOR OTO 081
121 TRYON ROAD A AC
RUTHERFORDTON 28139 704 286-063
FAX 704 286-564

DEGRAW, MARTIN CRAWFORD FP 025
810 KENNEDY AVE. A AC
NEW BERN 28560 919 633-168

DEGREGORIO, PETER ANTHONY IM 082
603 BEAMAN ST. AC
CLINTON 28328 919 592-191

DEGUEHERY, LINDSEY E. PUD 098
1700 S. TARBORO ST. * AC
WILSON 27893 919 399-227

DEHMER, GREGORY J. CD /IM 032
UNC HOSP. CARDIAC CATH LAB AC
101 MANNING DR.
CHAPEL HILL 27599 919 966-514

DEHOFF, PHILIP WILLIAM OBG 060
1718 E. 4TH ST., #907 A AC
CHARLOTTE 28204 704 365-047

DEJARNETTE, LISA FAYE IM 092
325 GLEN ECHO LN., # C
CARY 27511

DEJUAN, EUGENE, JR. OPH 032
BOX 3802, DUKE EYE CENTER A AC
DURHAM 27710 919 684-563
FAX 919 684-223

DEKLE, LARRY CARLTON P /PD 034
250 CHARLOIS BLVD. AC
WINSTON-SALEM 27103 919 725-777

DELEON, ARTURO DEJESUS FP /IM 092
1109 DRESSER COURT AC
RALEIGH 27609 919 872-490

DELEON, ROSEMARY ESPINO AN 092
2903 ADRIAN COURT AC
RALEIGH 27604 919 829-955

DELIGIO, JAMES J. FP /HYP 07
4716 CROATAN HIGHWAY AC
KITTY HAWK 27949 919 261-384

DELLASEGA, MARK IM /GE 07
1705 W. SIXTH ST. AC
GREENVILLE 27834 919 752-610
FAX 919 752-778

DELLINGER, CLYDE JAMES FP 01
P. O. BOX 8 AC
DREXEL 28619 704 437-363
FAX 704 438-238

DELLINGER, ERIC HENRY OBG 07
ECU, STANTONSBURG RD. A A
GREENVILLE 27858 919 551-498

DELOATCH, RAVEN LIONEL IM 06
PO BOX 86 A
MILWAUKEE 27854 919 534-166

DEMAS, RONALD CHARLES N /PM 06
2115 EAST 7TH ST.,STE. 101 A AC
CHARLOTTE 28204 704 372-371

DEMASON, MARC GS 07
515 THOMPSON ST., STE. B AC
EDEN 27288 919 623-911

DEMENT, JOSEPH MILLER ORS 01
111 VICTORIA RD. A AC
ASHEVILLE 28801 704 252-733

DENHAM, JOHN WILLIAM IM /PM 03
250 CHARLOIS BLVD. AC
WINSTON-SALEM 27103 919 768-473

DENKER, MICHELE J. 03
614 ARLINGTON ST. F
CHAPEL HILL 27514 919 967-054

DENNING, CHRISTOPHER MARSHAL FP 07
ECU FAMILY PRAC. CTR. A
GREENVILLE 27858 919 551-545

DENNIS, KENNETH MICHAEL PD /ADL 08
418 KING ST. AC
LAURINBURG 28352 704 627-922

DENNIS, PATRICK MICHAEL OPH 05
DOWN EAST EYE CENTER, PA AC
2104 N. HERRITAGE ST.
KINSTON 28501 919 523-959

DENNIS, RONALD GREENE OTO 08
3535 RANDOLPH RD., STE. 210 AC
CHARLOTTE 28211 704 365-071
FAX 704 366-356

ENNIS, STEVEN HENRY OTO 091
VANCE MEDICAL ARTS BLDG. AC
HENDERSON 27536 919 492-9720

ENNISON, HERBERT EUGENE OBG 045
630 FIFTH AVENUE, WEST AC
HENDERSONVILLE 28739 704 692-2258

ENNISON, WM. BRIAN IM /RHU 018
PO BOX 1020 AC
LENOIR 28645 704 758-5544

ENNY, FLOYD WOLFE, JR. PD /ID 032
BOX 3, WING D, CB #7240 AC
UNC SCHOOL OF MEDICINE
CHAPEL HILL 27599 919 962-1136
FAX 919 966-5830

ENNY, KEVIN M. P 060
1900 RANDOLPH RD. A AC
CHARLOTTE 28207 704 333-7722

ENNY, MARGARET ELIZABETH 032
909 N. PEACE HAVEN RD. A S
WINSTON-SALEM 27104 919 765-2899

ENTON, WAYNE HOLT P 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-6993
FAX 919 748-4204

ENUNA, VICENTE BOGADOR ABS /GS 059
28 N. LOGAN STREET AC
MARION 28752 704 652-5797

ENUNZIO, NEIL L. IM 070
PO BOX 9 A AC
WINFALL 27985 919 426-9172

EPERCZEL, JOHN LESLIE ORS /GP 018
521 11TH AVE. CIRCLE NW A AC
HICKORY 28601 704 324-2800

ERBYSHIRE, JOHN STUART IM 064
1051 COUNTRY CLUB DR. A AC
PO BOX 7828
ROCKY MOUNT 27804 919 977-6746

ERIAN, THOMAS C. ORS 032
PO BOX 15249 A AC
DURHAM CLINIC, PA
DURHAM 27704 919 479-4100

ERRICK, WILLIAM ADAM, JR. ADL /GP 095
ASU HEALTH SERVICES AC
BOONE 28608 704 262-3100

ESIMONE, ROBERT ALFRED R 092
315 LOCHSIDE DR. P C
CARY 27511 919 467-5900

ESKINS, WILLIAM CYPHERS FP 090
1420 E. FRANKLIN ST. A AC
MONROE 28110 704 289-8427

ESROCHERS, DAVID ALAN DR 007
630 E. 11TH ST. * AC
WASHINGTON 27889 919 946-2137

ESTEFANO, AMY ANN 032
105-D WEATHERSTONE DR. S
CHAPEL HILL 27514 919 942-6372

ESTEFANO, NEIL MICHAEL GS /GYN 079
PO BOX 780 AC
REIDSVILLE 27320 919 349-8484

ETERDING, JAMES LEROY NEP /IM 041
111 W. WENDOVER AVE. A P AC
GREENSBORO 27401 919 379-9708
FAX 919 379-8714

ETTERBECK, FRANK C. 032
123 STATESIDE DR. R
CHAPEL HILL 27514 919 966-3381

ETWEILER, DONALD GENE DR 092
6612 FIFE BREW LANE AC
RALEIGH 27614 919 783-3023

EUTSCH, MARGARET ANN ON /HEM 032
63 FEARRINGTON POST R
PITTSBORO 27312 919 684-4385

EVASTHALI, SHIRISH DHONDU IM /HEM 026
PO BOX 58097 A AC
FAYETTEVILLE 28305 919 483-8586

EVILLA, AMADA RUIZ OPH 042
204 BECKER DR. A AC
ROANOKE RAPIDS 27870 919 537-8193

EVINE, GERARD MICHAEL IM 078
395 WEST 27TH STREET A AC
LUMBERTON 28358 919 739-7551

EVINE, LEIBERT EARL FP 021
P. O. BOX 298 AC
EDENTON 27932 919 482-7774

EWALD, JONATHON GLEN IM 098
1700 S. TARBORO ST. AC
WILSON 27893 919 399-2257

DEWALT, JOSEPH LEO IM /ORS 032
IRIS LANE AC
CHAPEL HILL 27514 919 966-2281

DEWAN, DAVID MICHAEL AN 034
3333 SILAS CREEK PKWY. A AC
FORSYTH MEM. HOSPITAL
WINSTON-SALEM 27103 919 760-5259

DEYTON, JOHN WESLEY, JR. OBG 067
124 MEMORIAL DRIVE P AC
JACKSONVILLE 28540 919 353-7741

DEYTON, ROBERT GUY, JR. GYN 074
101 BETHESDA DRIVE A * AC
GREENVILLE 27834 919 758-4181
FAX 919 758-2603

DHANDE, VIJAY G. PD /NPM 060
PO BOX 33549 A AC
PRESBYTERIAN HOSP.
CHARLOTTE 28233 704 371-4944

DHATT, MALKIAT SINGH CD /IM 076
P. O. BOX 2028 AC
ASHEBORO 27203 919 629-4176

DHILLON, TEJPAL SINGH ORS 092
PO BOX 52277 A AC
RALEIGH 27612 919 881-0177

DIAB, ALBERT JOSEPH IM 092
3801 COMPUTER DRIVE AC
RALEIGH 27609 919 787-5217

DIAMOND, JOHN MICHAEL CHP /P 074
DEPT. OF PSYCHIATRY A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2673

DIAZ-BUXO, JOSE ANTONIO NEP /IM 060
928 BAXTER STREET A AC
CHARLOTTE 28204 704 374-1321
FAX 704 334-3061

DICK, ANDREW EDWARD CD 032
134 MALLARD COURT AC
CHAPEL HILL 27514 919 942-8741

DICKERSON, ANDREW JACKSON GS /TS 044
110 WAYNEWOOD DR. L/RT
WAYNESVILLE 28786 704 456-5002

DICKERSON, LEON ARCHIBALD, JR. ORS 060
2600 E. 7TH ST. A AC
CHARLOTTE 28204 704 372-9820
FAX 704 342-0764

DICKERSON, STEVEN REID 034
2307 QUEEN ST. #D A S
WINSTON-SALEM 27103 919 777-1491

DICKIE, JAMES WILLIAM GS 065
448 WAYNE DRIVE A L/RT
WILMINGTON 28403 919 762-8429

DICKINSON, MICHAEL WRIGHT GS /CDS 018
415 N. CENTER ST., STE. 102 A AC
HICKORY 28601 704 327-9178

DICKSON, ALBERT PICKETT,III FP 006
PO BOX 219 AC
NEWLAND 28657 704 733-9276

DICKSON, BRICE TEMPELTON, JR. IM 036
837 ATHENIAN DR. A L/RT
GASTONIA 28052 704 867-7656

DICKSON, F. KEELS OTO /A 060
485 N. WENDOVER RD. A P AC
CHARLOTTE 28211 704 366-7921

DICKSON, ROBERT TRULOCK GE 054
806 WESTMINISTER LANE AC
KINSTON 28501 919 522-3072

DICKSTEIN, SHERRY ANNE OBG 041
301 E. WENDOVER AVE. A AC
GREENSBORO 27401 919 273-2835
FAX 919 274-4594

DIECKMANN, MERWIN R. FP 016
209-B MCLEAN DR. A AC
SWANSBORO 28584 919 393-6543

DIERING, SCOTT LOUIS 034
414 LOCKLAND AVE. S
WINSTON-SALEM 27103 919 777-1477

DIETRICK, RONALD BURTON GS /TS 026
VA MEDICAL CENTER C
RAMSEY ST.
FAYETTEVILLE 28304 919 488-2120

DIFIORE, RALPH J. ORS 067
200 DOCTORS DR. STE. J AC
JACKSONVILLE 28540 919 353-1412

DIGBY, DONALD JOE OPH 041
721 GREEN VALLEY RD. STE. 406 A AC
GREENSBORO 27408 919 230-1010

DIGBY, RONALD WYMAN CD /IM 036
1896 REMOUNT ROAD A AC
GASTONIA 28054 704 867-0735

DILL, DAVID LEE DR 014
203 CEDAR ROCK EST. DR. A AC
LENOIR 28645 704 754-2283

DILL, FRANKLIN GEORGE GYN 067
124 MEMORIAL DRIVE P AC
JACKSONVILLE 28546 919 353-7741

DILLARD, MARGARET BLEICK IM 074
3106 BUCKINGHAM RD. R
DURHAM 27707 919 966-2561

DILLARD, SAM BOOKER D 060
1530 QUEENS RD. #1204 L/RT
CHARLOTTE 28207 704 333-8811

DILLEY, JAMES R. NEP 034
3310 BROOKVIEW HILLS BLVD. AC
SUITE 103
WINSTON-SALEM 27103 919 768-2425

DILLINGHAM, WILLIAM STEPHEN P 060
479 N. WENDOVER RD. AC
CHARLOTTE 28211 704 365-3185
FAX 704 365-9779

DILLON, DANIEL CHRISTIAN IM /GE 018
11 13TH AVENUE, N. E. P AC
HICKORY 28601 704 322-1068

DILWORTH, JOHN HERBERT ORS /HS 041
1505 WESTOVER TERR. A AC
GREENSBORO 27408 919 275-0927

DIMEO, MICHAEL JOSEPH CC /IM 001
1604 MEMORIAL DR. A P AC
BURLINGTON 27215 919 226-7300

DIMITRIOUS, ROBIN AN 024
P. O. BOX 364 A AC
WHITEVILLE 28472 919 642-8011

DIMMIG, THOMAS A. ORS 032
2609 N. DUKE ST. A AC
DURHAM 27704 919 471-8431

DINAPOLI, RAPHAEL JOSEPH, JR. PH /AM 032
1985 UMSTEAD DR. A * AC
DIV. OF MEDICAL ASSISTANCE
RALEIGH 27603 919 733-2833

DINEEN, JAMES ROBERT ORS 065
1616 MEDICAL CENTER DRIVE AC
WILMINGTON 28401 919 762-2655

DINGELDEIN, STEVEN ANDREW OPH 001
1214 VAUGHN RD. * AC
ALAMANCE EYE CENTER
BURLINGTON 27217 919 228-0254

DINGFELDER, JAMES RAY OBG 032
180 PROVIDENCE RD. A AC
THE TIBURON CTR.
CHAPEL HILL 27514 919 942-4100

DINKENOR, MARTHA S. C. 034
300 S. HAWTHORNE RD. R
WINSTON-SALEM 27103 919 748-2011

DIOQUINO, RENATO MERCADO IM /PUD 059
240 S. MAIN STREET AC
MARION 28752 704 652-2214

DIVERIS, JOHN MICHAEL ORS 060
701 E. ROOSEVELT BLVD. AC
MONROE 28110 704 541-3055

DIXON, DIRK STANCILL, SR. R 029
P. O. BOX 1532 AC
LEXINGTON 27292 919 249-1515

DIXON, JAMES WELLINGTON GS /GP 041
P. O. BOX 20085 AC
GREENSBORO 27420 919 378-1957

DIXON, MARK DALE 000
444 S. 23RD ST. R
WILMINGTON 28403 919 251-0457

DIXON, ROBERT ROSS PD 018
240 18TH ST. CIRCLE, SE AC
HICKORY 28602 704 322-2550

DIXON, SEWELL HINTON, JR. CDS /TS 041
1317 N. ELM ST., STE. 1 A AC
GREENSBORO 27401 919 373-8245
FAX 919 373-8949

DOANE, JOHN HORTON, JR. IM /CD 034
250 CHARLOIS BOULEVARD AC
WINSTON-SALEM 27103 919 768-4730

DOBSON, LOLO ALLEN, JR. FP 013
115 COOK ST. * AC
PO BOX 1058
MT. PLEASANT 28124 704 436-6521

DODD, PATRICIA GS /GYN 011
325 VANDERBILT RD. A L/RT
ASHEVILLE 28803 704 274-2795

DODD, RICHARD CRAIG IM /END 011
445 BILTMORE CTR., STE. 302 A AC
ASHEVILLE 28801 704 253-6812

DODDS, GEORGE MATTHEW 032
525 ROBIN RD. R
CHAPEL HILL 27516 919 966-4131

DOFFERMYRE, LUTHER RANDOLPH FP 043
P. O. BOX 1011 A L
DUNN 28334 919 892-4151

DOLAN, DANIEL LYNN IM /CD 011
9 BAIRD MOUNTAIN ROAD WEST A AC
ASHEVILLE 28804 704 658-2677

DOLINAR, LOUIS JOHN P 074
ECU SCHOOL OF MEDICINE AC
DEPT. OF PSYCHIATRY
GREENVILLE 27858 919 551-2986

DOLS, KENNETH JOHN ORS 036
902 COX RD., STE. D AC
GASTONIA 28054 704 864-6723

DOMBY, WILLIAM ROGER PUD /IM 011
30 CHOCTAW STREET A AC
ASHEVILLE 28801 704 255-7733

DONAHUE, MICHAEL JOSEPH D 065
1505 MEDICAL CENTER DRIVE A P * AC
WILMINGTON 28401 919 763-1555

DONALD, WILLIAM BLANTON, JR. OPH 040
624 QUAKER LANE, SUITE 202-C AC
HIGH POINT 27262 919 884-2242

DONALDSON, D. SCOTT 074
102 SARA LANE #B A S
GREENVILLE 27834 919 758-4695

DONALDSON, JONATHAN T. U 032
4310 BEECHNUT LN. A R
DURHAM 27707 919 684-8111

DONAYRE, LUIS ERNESTO GS /TS 024
144 JEFFERSON STREET A AC
WHITEVILLE 28472 919 642-3136

DONGRE, SHRIKUMAR SHRIPAD AN 034
1216 BROOK ACRES TRAIL A AC
CLEMMONS 27012 919 760-5180

DONOHUE, JAMES FRANCIS PUD /IM 032
UNC, 724 BURNETT-WOMACK AC
CHAPEL HILL 27599 919 966-2531

DONOVAN, MICHAEL P. 032
605 JONES FERRY RD., APT. Q9R R
CARRBORO 27510

DOOLEY, MARY ANNE 032
BOX 2918, DUMC R
DURHAM 27710 919 684-2949

DOOLITTLE, ROBERT PRINCE ADL /IM 041
UNC-G STUDENT HEALTH CENTER AC
GREENSBORO 27412 919 334-5340

DORENBUSCH, ALFRED ADOLPH OTO 060
2732 HAMPTON AVE. A L/RT
CHARLOTTE 28207 704 334-0498

DORFMAN, MARGARET JEANNE P 032
6320 QUADRANGLE DR., STE. 330 AC
CHAPEL HILL 27514 919 490-6474

DORMAN, BRUCE HUGH ORS 065
2001 S. 17TH STREET AC
WILMINGTON 28401 919 763-7344

DORN, ROBERT M. FP 023
PO BOX 815 AC
BOILING SPRINGS 28017 704 434-2281

DORNBLAZER, GEORGE HENRY P 060
1332 HARDING PLACE A AC
CHARLOTTE 28204 704 342-2577

DORSETT, FLETCHER I. IM 034
2020 HOLLYROOD STREET A L/RT
WINSTON-SALEM 27107 919 723-5732

DORSETT, JOHN DEWEY, JR. IM /CD 060
411 BILLINGSLEY RD. #105 AC
CHARLOTTE 28211 704 333-4175
FAX 704 372-7016

DORTON, PHILLIP KEVIN OBG 029
1302 LEXINGTON AVE. A AC
THOMASVILLE 27360 919 475-6139

DOSS, GEORGE WESTON P 011
HIGHLAND HOSPITAL A AC
P. O. BOX 1101
ASHEVILLE 28802 704 254-3201

DOTTERER, ELIZABETH JAMES IM /GYN 053
118 HAWKINS AVENUE A L
SANFORD 27330 919 776-5723

DOTTERER, JOHN EMANUEL GER /FP 053
118 HAWKINS AVENUE A L
SANFORD 27330 919 776-5723

DOUGHERTY, KEVIN E. IM 092
RALEIGH MEDICAL PLAZA AC
3320 WAKE FOREST RD.
RALEIGH 27609 919 878-0219

DOUGLAS, ARTHUR EUGENE, JR. P 078
4900 INDEPENDENCE BLVD. #28 A AC
LUMBERTON 28358 919 738-8230

DOUGLAS, BENJAMIN OTO /HNS 050
2 MITCHELL RD. A AC
SYLVA 28779 704 586-7474

DOUGLAS, EDGAR SMITH, JR. OBG 074
101 BETHESDA DRIVE A AC
GREENVILLE 27834 919 758-4181
FAX 919 758-2603

DOUGLAS, JOHN MUNROE IM 060
4107 POMFRET LN. A L/RT
CHARLOTTE 28211 704 366-0267

DOUGLAS, MICHAEL ERIN AN 095
301 BIRCH STREET AC
BOONE 28607 704 264-4691

DOUGLASS, DONALD PERRY GS /TS 040
401 WESTWOOD AVENUE A P AC
HIGH POINT 27262 919 887-4066
FAX 919 887-4069

DOVER, CARL THOMAS, JR. PD 007
312 S. MCCASKEY RD. AC
PO BOX 845
WILLIAMSTON 27892 919 792-8101

DOWDESWELL, ROBERT HORTON PTH 045
735 SIXTH AVE., WEST AC
HENDERSONVILLE 28739 704 697-6781

DOWDY, DAVID A. CD 060
700 E. STONEWALL ST., STE. 760 AC
CHARLOTTE 28202 704 322-5117

DOWLING, MICHAEL SCOTT IM 032
1301 FAYETTEVILLE ST. R
DURHAM 27707 919 683-1316

DOWNEY, LUCY MCMASTER BIDDLE PD 076
350 N. COX ST. #8 A AC
ASHEBORO 27203 919 626-3560

DOWNS, POSEY EDGAR, JR. OBG 060
16601 ONE HUNDRED NORMAN PL. L/RT
HUNTERSVILLE 28078 704 376-1612

DOYLE, GREGORY WM. R 041
1013 PROFESSIONAL VILL. A AC
GREENSBORO 27401 919 275-6481

DOYLE, KEVIN MICHAEL 032
12-B TARAWA TERRACE S
DURHAM 27705 919 383-6267

DOYLE, LORRAINE KERLICK ORS /HS 011
111 VICTORIA AT OAKLAND RD. A AC
ASHEVILLE 28801 704 252-7331

DOYLE, OWEN WILLIAM DR 041
1013 PROFESSIONAL VILLAGE A * AC
GREENSBORO 27401 919 275-6481

DOYLE, RAYMOND THOMAS IM /HEM 064
1051 COUNTRY CLUB DR. A AC
PO BOX 7828
ROCKY MOUNT 27804 919 937-4084

DRAELOS, MICHAEL T. GE 040
624 QUAKER LN. STE. C-100 AC
HIGH POINT 27262 919 885-8158

DRAELOS, ZOE DIANA D 040
1311 COUNTRY CLUB DR. A * AC
HIGH POINT 27262 919 887-3195

DRAFFIN, RICHARD MARION PTH 032
PO BOX 15643 A * AC
DURHAM 27704 919 470-5251

DRAKE, ALMOND JERKINS, III IM 000
DEPT. OF ENDO-CODE 0253 A R
NNMC
BETHESDA, MD 20814 301 295-5165

DRAKE, AMELIA FISCHER PD 032
UNC, CB 7070 AC
CHAPEL HILL 27599 919 966-3341
FAX 919 966-7656

DRAKE, SAMUEL THOMAS GE /IM 036
603 COX ROAD AC
GASTONIA 28054 704 867-3585

DRAKE, WILTON RODWELL, JR. FP 091
VANCE MEDICAL ARTS CENTER AC
HENDERSON 27536 919 492-3152

DRAY, GREGORY JOSEPH HS /ORS 011
20 MCDOWELL ST. A AC
ASHEVILLE 28801 704 253-7521

DREILING, DALE T. FP 041
510 N. ELAM AVE. AC
GREENSBORO 27403 919 852-3800

DRENKHAHN, JANE ELLEN 032
3509 THAMESFORD RD. S
FAYETTEVILLE 28311 919 488-3927

DRENNING, DAVID HUMPHREY IM 045
1307 BEVERLY DR. AC
RICHMOND, VA 23229

DREW, JOHN EDWIN FP 033
P. O. BOX 337 A AC
MACCLESFIELD 27852 919 827-5231

DRIVER, ALBERT GARDNER, JR. PUD /IM 074
DEPT. OF MEDICINE AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4653
FAX 919 551-2012

DROEGEMUELLER, WILLIAM GYN 032
908 WOODBINE DR. AC
CHAPEL HILL 27514 919 966-5281

DROSSMAN, DOUGLAS ARNOLD GE /PYM 032
UNC, 324 CLINICAL SCIENCE BLDG AC
CHAPEL HILL 27599 919 966-2511

DRUMMOND, JACK NEWTON FP 096
GRANTHAM MEDICAL CLINIC AC
RT. 1, BOX 100-C
GOLDSBORO 27530 919 689-2222

DUBOSE, JOHN MCNEELY TS /GS 054
P. O. BOX 1316 A AC
KINSTON 28501 919 522-1626

DUCK, SIGSBEE WALTER OTO 040
624 QUAKE LN., STE. 301-D * AC
HIGH POINT 27262 919 883-1366

DUCK, WALTER OTIS FP 057
DRAWER 729 A * L/RT
MARS HILL 28754 704 689-2411

DUCKETT, CHARLES HOWARD FP 074
DEPT. OF FAMILY MEDICINE A * AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2608
FAX 919 551-8040

DUDLEY, ALLISON JOHNSON PD 060
2317 RANDOLPH ROAD AC
CHARLOTTE 28207 704 376-5572

DUDLEY, BARBARA MARIE 074
1226 TREYBROOKE CIR. A * S
GREENVILLE 27834 919 758-7006

DUDLEY, CHARLES COUNCIL, JR. PTH /FP 086
320 IVY CIRCLE A RT
ELKIN 28621 919 835-2931

DUDLEY, JOSEPH BOYLES PTH 034
3333 SILAS CREEK PARKWAY A AC
WINSTON-SALEM 27103 919 760-5840

DUDLEY, R. ADAMS 032
3611 UNIVERSITY DR., APT. 9-S S
DURHAM 27707 919 383-6387

DUFFY, CHARLES FP 025
1506 LUCERNE WAY A L
NEW BERN 28560 919 637-2077

DUGGINS, STEPHANIE MURPHY 034
1608-M NORTHWEST BLVD A S
WINSTON-SALEM 27104 919 724-7480

DULA, FREDERICK MAST, JR. R 080
401 MOCKSVILLE AVE., STE. 100 A AC
SALISBURY 28144 704 633-1023

DULIN, THOMAS LEROY FP 060
200 GREENWICH RD. A AC
CHARLOTTE 28211 704 366-5002
FAX 704 365-4194

DUMAS, MARK NEAL IM 054
313 AIRPORT RD. AC
KINSTON 28501 919 522-3072

DUMMIT, ELDON STEVEN, JR. PTH 053
P. O. BOX 1378 A AC
SANFORD 27330 919 774-2272

DUNAWAY, BYRON EDWARD ORS 049
PO BOX 1460 AC
STATESVILLE 28677 704 878-2011
FAX 704 878-2563

DUNAWAY, HOWARD YATES, III ORS 060
120 PROVIDENCE RD. A AC
CHARLOTTE 28207 704 377-0351

DUNCAN, STACY ALLEN, JR. FP 043
306 W. EDGERTON STREET AC
DUNN 28334 919 892-2151

DUNHAM, CYNTHIA BYRD IM /NEP 032
9420 BRIDLE SPUR ROAD A R
CHAPEL HILL 27516 919 942-2242

DUNKELBERG, RAY HAMILTON IM /NEP 088
NEWLAND MED. BLDG. A AC
BREVARD 28712 704 884-9030

DUNLAP, BENJAMIN EMERSON FP 049
925-C THOMAS STREET * AC
STATESVILLE 28677 704 872-7636

DUNLAP, JACK ERWYN ORS 078
4320 FAYETTEVILLE ROAD AC
LUMBERTON 28358 919 739-0634

DUNLAP, WILLIAM MARSHALL ON /IM 092
3521 HAWORTH DR. A AC
RALEIGH 27609 919 782-1806

DUNN, ERNEST CLINTON, JR. GP 025
PO BOX 729 A AC
PAMLICO MEDICAL CTR., PA
BAYBORO 28515 919 633-1616

DUNN, FREDRICK LAURENCE END /DIA 032
BOX 3939, DUMC A P AC
DURHAM 27710 919 684-3319
FAX 919 684-8747

DUNN, JACK NEWTON U 045
807 BARBARA BLVD. AC
HENDERSONVILLE 28739 704 692-2197

DUNN, JAMES RALPH, JR. GS /TS 092
109 MISS GEORGIA CT. A * AC
CARY 27511 919 733-5401

DUNN, KATHLEEN ANNE GPM 074
DEPT. OF PREVENTIVE MED. A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2980

DUNN, LAURIE LOUISE NPM /PD 092
3000 NEW BERN AVE. AC
WAKE AHEC
RALEIGH 27610 919 755-8545

DUNN, THADDEUS L. PUD /CC 065
1515 DOCTORS CIRCLE AC
WILMINGTON 28401 919 763-5182
FAX 919 762-9419

DUPUY, DAVID NORRIS ORS 060
3535 RANDOLPH ROAD A AC
CHARLOTTE 28211 704 365-2111

DUPUY, SAMUEL STUART U 060
301 HAWTHORNE LANE A AC
CHARLOTTE 28204 704 374-0236

DURFEE, MICHAEL FULK ADL /PD 092
WAKE TEEN MEDICAL SERVICES AC
619 OBERLIN RD.
RALEIGH 27605 919 828-0035

DURHAM, CECIL TRACY, JR. N 011
7 MCDOWELL STREET A AC
ASHEVILLE 28801 704 255-7776

DUROCHER, KEVIN HOWARD P 065
2311 CANTERWOOD DR. A AC
WILMINGTON 28401 919 762-9606

DURR, ROBERT ALAN PUD /IM 092
3320 OLD WAKE FOREST RD. AC
RALEIGH 27609 919 872-4850

DURR, WALTER JACOB GS 050
P. O. BOX 455 A L
SYLVA 28779 704 586-2176

DUSZAK, RICHARD, JR. DR 032
2 HITCHING RACK CT R
DURHAM 27713 919 681-2711

DUSZLAK, EDWARD J., JR. DR 001
3029 S. FAIRWAY DR. * AC
BURLINGTON 27215 919 228-1371

DUTTON, JONATHAN JOSEPH OPH /ON 032
BOX 3802, DUKE EYE CENTER A AC
DURHAM 27710 919 684-3142

DUVALL, PAUL BRANDON FP 088
NEWLAND MED. BLDG. AC
GALLIMORE ROAD
BREVARD 28712 704 884-9030

DWANE, RICHARD JOHN OBG 032
BOX 3232, DUMC AC
DURHAM 27710 919 684-5123

DYE, DAVID GODDARD ORS 041
809 GREEN VALLEY RD. A AC
GREENSBORO 27408 919 275-3325
FAX 919 275-5346

DYER, JEFFREY JAMES OTO 034
211-21 DALEWOOD DR. A S
WINSTON-SALEM 27104 919 659-8455

DYER, RAYMOND BRUCE DR 034
300 S. HAWTHORNE RD. A AC
DEPT. OF RADIOLOGY
WINSTON-SALEM 27103 919 748-4316

DYKERS, JOHN REGINALD, JR. FP 019
P. O. BOX 565 AC
422 N. IVY AVENUE
SILER CITY 27344 919 663-2931

DYKES, JAMES RUSSELL FP 032
114 SWIFT AVE. AC
DURHAM 27705 919 286-7755

DYMOND, JOHN BOOTH, JR. 074
40 COUNTRY CLUB DR. A S
GREENVILLE 27834 919 355-3178

EADIE, EDWARD B., JR. U 070
1134 N. ROAD STREET A P AC
ELIZABETH CITY 27909 919 338-4141

EAGLE, ELIZABETH ANNE DR 041
PO BOX 13005 A AC
GREENSBORO 27415 919 379-4140

EAGLES, ARCHIE YELVERTON IM 008
RT. #2, BOX 25 A L/RT
AHOSKIE 27910 919 332-5596

EAKINS, JOEY WILLIAM IM /ID 065
6436 QUAIL RUN ROAD AC
WILMINGTON 28409 919 343-9991
FAX 919 343-8448

EARL, JOHN KEITH FP 018
210 13TH AVE. PLACE, N.W. AC
HICKORY 28601 704 328-2941

EARLY, IRA G., SR. IM /CD 034
3004 BUENA VISTA RD. L/RT
WINSTON-SALEM 27106 919 722-6010

EARNEST, ROBERT RHEA PD /ADL 044
102 HOSPITAL DR. AC
CLYDE 28721 704 452-2211

EARNHARDT, JAMES FREDERICK PD 034
3318 HEALY DRIVE AC
WINSTON-SALEM 27103 919 765-8490

EARP, HENRY SHELTON, III END /IM 032
UNC, DEPT. OF MEDICINE AC
CHAPEL HILL 27599 919 966-3338
FAX 919 966-3015

EASLEY, ELEANOR BEAMER GYN /OBS 032
750 WEAVER DAIRY RD., #141 A L/RT
CHAPEL HILL 27514 919 968-8229

EASLEY, HENRY ALEXANDER, III OBG 074
101 BETHESDA DR. A * AC
GREENVILLE 27834 919 758-4181

EASLEY, KEVIN OWEN OBG /LM 074
101 BETHESDA DR. A AC
GREENVILLE 27834 919 758-4181

EASOM, HERMAN FRANKLIN PUD 098
118 CANTERBURY RD. A L
WILSON 27893 919 243-4752

EASON, ERNEST BERNARD IM 001
1522 VAUGHN RD. * AC
BURLINGTON 27215 919 226-1658

EASON, GEORGE WILLIAM DR 010
711 FOREST HILLS DR. C
WILMINGTON 28403 919 399-8112
FAX 919 457-0006

EASON, MARGIE BEAZLEY P 034
2729 SAWGRASS COURT A R
WINSTON-SALEM 27103 919 748-2011

EASON, PAUL RICHARD IM 034
2729 SAWGRASS COURT A R
WINSTON-SALEM 27103 919 748-2011

EASTERBROOK, JAMES STILWELL DR 026
101 ROBESON ST., STE. 100 A AC
FAYETTEVILLE 28301 919 483-9900

EASTERLING, WILLIAM E., JR. GYN /END 032
UNC, MACNIDER BLDG. CB 7000 A * AC
CHAPEL HILL 27599 919 966-5214

EASTMAN, JOSEPH RILUS, III PTH /BLB 074
DEPT.OF CLI. PTH/DIAG.MED. A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-5094

EASTMAN, WILLIAM JOSEPH, JR. 074
1311 TREYBROOKE CIR. A * S
GREENVILLE 27834 919 830-6983

EASTON, EDWARD JAMES, JR. NM /DR 060
CHARLOTTE RADIOLOGY A AC
PO BOX 36937
CHARLOTTE NC 28236 704 373-2430

EASTWOOD, FREDERICK THOMAS PD 092
P. O. BOX 30203 A L/RT
RALEIGH 27622 919 787-1961

EATON, HUBERT ARTHUR, JR. IM 065
P. O. BOX 982 AC
WILMINGTON 28401 919 763-5453

EATON, LISLE A., JR. PTH 032
8 WHITE OAK TR. R
CHAPEL HILL 27516 919 966-4334

EATON, ROBERT FARRELL ORS 045
1027 FLEMING STREET A AC
HENDERSONVILLE 28739 704 692-5781

EAVES, RUPERT SPENCER, JR. OPH 036
631 COX RD. AC
GASTONIA 28054 704 864-7789
FAX 704 864-4884

EBERLE, ROBERT ADAM IM 034
3310 BROOKVIEW HILLS BLVD.#201A AC
WINSTON-SALEM 27103 919 725-3591

EBKEN, RICHARD KEPPLER GS /TS 053
P. O. BOX 1169 A AC
SANFORD 27330 919 775-7146

ECKBERT, WILLIAM FOX FP 036
P. O. BOX 309 A L
CRAMERTON 28032 704 824-1321

ECKLEY, GEORGE MORGAN, JR. IM 049
569 LAKESIDE DR. A L/RT
STATESVILLE 28677 704 873-4334

ECKSTEIN, WILLIAM LAURENCE PD 067
118-C MEMORIAL DR. AC
JACKSONVILLE 28546 919 577-5199

EDDINGER, CHARLES FREDERICK FP 080
900 SPENCER AVE. S/RT
SPENCER 28159 704 636-1720

EDDINS, GEORGE EDGAR, JR. IM /CD 084
24859 NORWOOD RD. L/RT
ALBEMARLE 28801 704 982-2127

EDELL, DEAN SCOTT PDP 032
210 KIRKWOOD DR. A R
CHAPEL HILL 27514 919 681-3364

EDGERTON, THOMAS ARTHUR CDS /TS 060
1900 RANDOLPH RD., STE. 216 A AC
CHARLOTTE 28207 704 372-1306
FAX 704 372-3109

EDKINS, PATRICIA TEAGUE RO 032
UNC HOSPITALS AC
DEPT. OF RADIATION ONCOLOGY
CHAPEL HILL 27599 919 966-1101

EDMONDS, JOHN HENRY, JR. CD /IM 034
BOWMAN GRAY SCH. OF MED. A AC
WINSTON-SALEM 27103 919 748-4208

EDMONDSON, DONALD AUSBON AN 092
PO BOX 18139 A AC
RALEIGH 27619 919 783-3034

EDMONDSON, FRANK, JR. FP 076
P. O. BOX 2628 A L/RT
ASHEBORO 27203 919 625-3230

EDMONDSON, MARY L. CANNING IM 092
WAKE COUNTY MEDICAL CENTER A AC
RALEIGH 27610 919 250-8520

EDMUNDSON, WARNER LEE WELLS IM 092
3900 BROWNING PLACE AC
RALEIGH 27609 919 781-9650

EDWARDS, ALLEN RICHARD FP /IND 049
RT. #3, BOX B-240 AC
STATESVILLE 28677 704 873-0281

EDWARDS, CARL LEON CD /C 012
PO BOX 700 AC
VALDESE GENERAL HOSPITAL
VALDESE 28690 704 874-1720

EDWARDS, CHARLES DANIEL GS 007
PO BOX 2145 A RT
WASHINGTON 27889 919 946-5370

EDWARDS, CHARLES HILLMAN, II CDS /TS 060
301 HAWTHORNE LANE A AC
CHARLOTTE 28204 704 375-8413
FAX 704 332-4602

EDWARDS, ELLISON FRANCIS FPS /MFS 060
3535 RANDOLPH ROAD, STE. 204 AC
CHARLOTTE 28211

EDWARDS, ELMO STEPHEN PD 092
2800 BLUE RIDGE BLVD.,STE. 501 A P * AC
RALEIGH 27607 919 781-7490

EDWARDS, GEORGE SADLER, JR. HS /ORS 092
3410 EXECUTIVE DR. A AC
RALEIGH 27609 919 872-3171

EDWARDS, GEORGE SADLER, SR. ORS 092
3410 EXECUTIVE DRIVE AC
RALEIGH 27609 919 872-5296

EDWARDS, JAMES L., JR. GE /IM 041
1511 WESTOVER TERR. STE. 108 A P AC
GREENSBORO 27408 919 378-0713

EDWARDS, JAMES RONALD PTH 092
1800 BRASSFIELD RD. A P * AC
RALEIGH 27614 919 755-8260

EDWARDS, JOEL LYNN FP 034
P. O. BOX 666 AC
MOCKSVILLE 27028 704 634-6128

EDWARDS, TIMOTHY FREEMAN OBG 067
245 MEMORIAL DR. A AC
JACKSONVILLE 28540 919 353-4333

EDWARDS, VANCE HOLDEN 034
1330 W. FIRST ST., APT. C S
WINSTON-SALEM 27101 919 723-0988

EFIRD, RANDY CLYDE AN 092
PO BOX 18139 A AC
RALEIGH 27619 919 783-3034

EGAN, THOMAS MICHAEL TS /GS 032
UNC, CB 7065 A AC
BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-3381
FAX 919 966-3475

EGGERS, GERALD WOOD PTH 034
3333 SILAS CREEK PKWY. A P AC
DEPT. OF PATHOLOGY
WINSTON-SALEM 27103 919 760-5840

EGLINTON, DANIEL THOMAS ORS 011
53 S. FRENCH BROAD A AC
ASHEVILLE 28801 704 252-7180

EGUEZ, JORGE FP 096
108 S. ANDREWS AVE. AC
GOLDSBORO 27530 919 734-6992

EHLE, ALBERT LAWRENCE N 032
UNC, 751 BURNETT-WOMACK AC
CHAPEL HILL 27599 919 966-3707

EHRLICHMAN, GLORIA SOTOMAYOR PD 082
603 BEAMAN STREET AC
CLINTON 28328 919 592-7712

EICHENBRENNER, TIMOTHY JOHN PD 060
411 BILLNGSLEY RD. #101 AC
PEDIATRIC & TEENAGE MEDICINE
CHARLOTTE 28211 704 332-8111

EIFRIG, DAVID ERIC OPH 032
UNC, DEPT. OF OPHTHALMOLOGY A AC
CHAPEL HILL 27599 919 966-5296
FAX 919 966-1908

EISELE, JOHN EVANS PD /PM 074
DEPT. OF PHYSICAL MED/REHAB. A AC
PO BOX 6028
GREENVILLE 27834 919 551-4440

EISENACH, JAMES CONRAD AN 034
FORSYTH MEMORIAL HOSP. A AC
OBSTETRIC ANESTHESIA
WINSTON-SALEM 27103 919 760-5295

EISENBERG, CARL JESSE R 060
2001 VAIL AVE. A P AC
CHARLOTTE 28207 704 379-5860

EISENBERG, EDWARD F. AN /P 032
600 DULUTH ST. R
DURHAM 27705 919 966-5136

EISENOFF, RICHARD SCOTT IM 060
3 FAIRVIEW PLAZA, STE. 100 AC
CHARLOTTE 28210 919 551-4200

EISNER, JONATHAN DAVID 032
601 JONES FERRY RD., APT. H-4 R
CARRBORO 27510 919 966-4131

EL-BAYADI, NAGUI R. GS 050
RT. #1, BOX 51 AC
SYLVA 28779 704 586-2156

EL-DROUBI, HAZEM U 077
111 MALLARD LN. A P AC
ROCKINGHAM 28379 919 997-5054

ELAM, MOSES D D 032
3150 DURALEIGH RD C
RALEIGH 27615 919 881-5408

ELBER, ERWIN RICHARD OTO 090
1501 E. FRANKLIN STREET A P * AC
MONROE 28110 704 289-9415

ELESHA, WILLIAM GS 034
1900 HAWTHORNE RD. #214 A L
WINSTON-SALEM 27103 919 765-1610

ELIZONDO, MERCEDITAS O. GP /PTH 081
20 N. MAIN STREET AC
CLIFFSIDE 28024 704 657-9742

ELLEDGE, EMMETT SCOTT OTO 034
114 DEVONSHIRE DR. R
SAN ANTONIO, TX 78209

ELLENBOGEN, CHARLES IM /ID 026
1601-B OWEN DRIVE A AC
FAYETTEVILLE 28304 919 323-1152

ELLINGTON, AMZI JEFFERSON, JR. GYN 001
291 N. GRAHAM-HOPEDALE RD. P AC
BURLINGTON 27215 919 226-2423

ELLINGTON, CHARLES P., III OBG 032
709 CROSSTIMBERS DR. R
DURHAM 27713 919 966-4131

ELLINGTON, JOE C., JR. 034
816 GALES AVE. A S
WINSTON-SALEM 27103 919 724-7691

ELLINGTON, KENNETH RAYNOR AN 011
202 DOCTORS BLDG. AC
ASHEVILLE 28801 704 254-1969

ELLINGTON, KENNETH S. 034
4800 UNIVERSITY DR. #7-D S
DURHAM 27707 919 725-8939

ELLINGTON, ROBERT NORWOOD GP /IND 001
1904 SUNNYBROOK DR. AC
BURLINGTON 27215 919 226-2423

ELLIOTT, CHARLES MARTIN CD /IM 060
1001 BLYTHE BLVD., STE. 300 A AC
CHARLOTTE 28203 704 373-1503

ELLIOTT, HARDIE BISHOP GS /EM 063
47 VILLAGE GREEN A AC
SOUTHERN PINES 28387 919 692-7451

ELLIOTT, JAMES FRANCIS, SR. P 039
ROUTE #2, BOX 405 A L/RT
CREEDMOOR 27522 919 528-2433

ELLIOTT, JOS. ALEXANDER, JR. D 060
1900 RANDOLPH RD. SUITE 714 A * L
CHARLOTTE 28207 704 375-0043

ELLIS, CHARLES ROBERT FP 080
702 HIGHLAND AVE. AC
PO BOX 8106
LANDIS 28088 704 857-0137

ELLIS, CLARENCE ONEIL IM 060
PO BOX 35294 A P AC
CHARLOTTE 28235 704 342-3888

ELLIS, DAVID A. OBG 045
630 5TH AVE. WEST AC
HENDERSONVILLE 28739 704 692-2258

ELLIS, GEORGE GREENE FP 059
P. O. BOX 789 AC
OLD FORT 28762 704 668-7694

ELLIS, GEORGE JOSEPH, JR. OBG 034
20705 POINTE REGATTA DR. AC
DAVIDSON 28036 704 892-5480

ELLIS, JOHN NELSON ORS 063
PINEHURST SURGICAL CLINIC A AC
PINEHURST 28374 919 295-6831

ELLISON, CARROL WENDELL OBG 012
500 E. PARKER ROAD A AC
MORGANTON 28655 704 433-5700

ELLISON, GERALD LYNN DR 026
2000 GALAX DR. P AC
FAYETTEVILLE 28304 919 323-2012

ELLISTON, E. BRUCE FP 011
206 ASHELAND AVE. * AC
ASHEVILLE 28801 704 258-8681

ELLISTON, WINSTON LEON AI /PD 011
210 ASHELAND AVE. A AC
ASHEVILLE 28801 704 253-3382

ELMORE, MILES IM /NEP 011
10 MCDOWELL STREET A AC
ASHEVILLE 28801 704 258-8545

ELMORE, WILLIAM GLENN DR 042
P. O. BOX 249 AC
ROANOKE RAPIDS 27870 919 535-2121

ELSNER, HENRY JOSEPH NS 041
200 E. NORTHWOOD ST. A C
GREENSBORO 27401 919 272-4578

ELY, EUGENE WESLEY, JR. 034
1016 VERNON AVE. A R
WINSTON-SALEM 27106 919 748-4490

ELY, KIM ADAMS 034
1016 VERNON AVE. A R
WINSTON-SALEM 27106 919 761-0331

ELY, RALPH LAWRENCE, III GS /VS 001
316 GRAHAM-HOPEDALE RD. A AC
BURLINGTON 27217 919 227-3621

EMERY, DARYL CHARLES CD /IM 092
3320 WAKE FOREST RD. AC
RALEIGH 27615 919 872-4850

EMERY, JOHN BLOOM, JR. IM 092
3100 DURALEIGH RD. AC
RALEIGH 27615 919 881-5404
FAX 919 881-5630

ENGEL, JEFFREY PHILLIP IM /ID 074
DEPT. OF MEDICINE AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2550
FAX 919 551-2224

ENGELKE, STEPHEN CARL PD /NPM 074
220 PINEVIEW DRIVE AC
GREENVILLE 27834 919 551-4665

ENGSTROM, GEORGE ALFRED PD 013
40 ARDSLEY AVENUE, N.E. AC
CONCORD 28025 704 786-1145

ENGSTROM, LINCOLN L. R /NR 064
217 KIMBERLY JO DR. A AC
ROCKY MOUNT 27804 919 443-8083

ENNIS, GEORGE ELLIOTT IM /HEM 018
912 SECOND STREET, N. E. AC
HICKORY 28601 704 328-2381

ENOJADO, SILVERIO CASTRO,JR. FP 009
P. O. BOX 308 AC
CLARKTON 28433 919 647-4311

ENRIGHT, KATHERINE ANNE P /IM 032
BOX 3492, DUMC A R
DURHAM 27710 919 684-8111

ENSOR, ROBERT DALE U 060
1333 ROMANY ROAD AC
CHARLOTTE 28204 704 372-5180
FAX 704 376-6280

ENTERLINE, DAVID SCOTT DR /NR 092
4420 LAKE BOONE TR. AC
RALEIGH 27607 919 783-3023

ENTWISTLE, JOHN WALTER C.,III 032
2408 BUCKINGHAM AVE. S
RICHMOND, VA 23228

ENYEDI, LAURA BARLOW 032
104 SIR RICHARD LANE A S
CHAPEL HILL 27514 919 942-2863

EPES, CHARLES RICHARD OPH 041
3312 BATTLEGROUND AVE. A AC
GREENSBORO 27410 919 282-5000

EPNER, RONALD ALAN ORS /HS 092
101 S.W. CARY PARKWAY AC
CARY 27511 919 467-4992
FAX 919 481-9607

ERB, NORRIS SCRIBNER U 080
8 OAK ROAD L/RT
SALISBURY 28144 704 633-2449

ERCKMAN, PAUL NEFF PD 090
MONROE CHILDREN'S CENTER, PA AC
1307-B E. FRANKLIN ST.
MONROE 28110 704 289-2556

ERDIN, ROBERT ALEXANDER, JR. CD /IM 040
624 QUAKER LN., STE. E-200 A AC
HIGH POINT 27262 919 885-6168

ERNEST, JOSEPH MCDONALD, III OBG /MFM 034
BOWMAN GRAY, DEPT. OF OBG * AC
WINSTON-SALEM 27103 919 748-4291
FAX 919 748-6937

ERNST, HENRY EDWIN IM 013
167 INGLESIDE DRIVE, S.E. L/RT
CONCORD 28025 704 782-0960

ERRICO, JAMES MELTON OPH 040
100 WESTWOOD AVENUE AC
HIGH POINT 27262 919 889-2323

ERTISCHEK, STEPHEN DAVID IM /GER 039
1032 COLLEGE STREET AC
OXFORD 27565 919 693-6541

ERVIN, MICHAEL LYNN 074
330 LINDSAY DR. #4G S
GREENVILLE 27834 919 355-1056

ESHELMAN, THOMAS CARL R 092
3909 LEWIS P OLDS WYND AC
RALEIGH 27612 919 755-3023
FAX 919 781-9729

ESPEY, DAN, JR. FP 018
434 5TH ST., SE L/RT
HICKORY 28601 704 327-0831

ESPORAS, DEMOSTHENES CAGBALINO U 053
2313 WESTWOOD DR. A AC
SANFORD 27330 919 775-7146

ESPOSITO, DAVID ANTHONY ORS 065
1616 MEDICAL CENTER DR. AC
WILMINGTON 28401 919 762-2655

ESTERWOOD, ANTHONY J. FP 041
77 BELLEVIEW RD. R
FRANKLIN 28734 704 369-2189

ESTES, EDWARD HARVEY, JR. IM /GER 032
3542 HAMSTEAD COURT A P * AC
DURHAM 27707 919 684-6331

ESTRADA, MARK D. 032
59 FASHION PLACE A * S
DURHAM 27705 919 382-8285

ESTWANIK, JOSEPH JOHN ORS /SM 060
325 BILLINGSLEY RD. #201 AC
CHARLOTTE 28211 704 334-4663

ETHERINGTON, JOHN L. OPH /OTO 096
2709 MEDICAL OFFICE PLACE A L
GOLDSBORO 27530 919 735-3701

EUBANKS, REAVIS THAYER GS 011
86 VICTORIA ROAD AC
ASHEVILLE 28801 704 253-2396

EUBANKS, WILLIAM MALCOLM, JR. GYN 060
1712 E. FOURTH STREET A AC
CHARLOTTE 28204 704 375-9074

EURE, CHARLES ALLAN IM 092
3521 HAWORTH DR. P AC
RALEIGH 27609 919 782-1806

EVANGELIST, FELIX ANTHONY TS /CDS 060
3601 E.INDEPENDENCE BLVD.,#204 A P AC
CHARLOTTE 28205 704 563-7788

EVANS, AMOS RAY P 074
1705 W. SIXTH STREET, BLDG. H A P * AC
GREENVILLE 27834 919 758-4810

EVANS, ARTHUR T. IM 032
UNC CB #7490 AC
HEALTH SERVICES RESEARCH CTR.
CHAPEL HILL 27599 919 966-1274

EVANS, BRYAN DEAN FP 025
810 KENNEDY AVE. A AC
NEW BERN 28560 919 633-1678

EVANS, CHARLES BRIAN OBG 034
2927 LYNDHURST AVE. AC
WINSTON-SALEM 27103 919 765-9350

EVANS, DAVID ARNOLD GYN 090
1408 E. FRANKLIN ST. A AC
MONROE 28110 704 289-2553

EVANS, ERNEST CRAIG GS 060
2300 RANDOLPH RD. A AC
CHARLOTTE 28207 704 376-0327

EVANS, EVAN DAVID 032
UNIVERSITY LAKE APTS. S
200 BARNES ST., APT. 10-D
CARRBORO 27510 919 968-4201

EVANS, LISA SMITH ON 034
3333 SILAS CREEK PARKWAY A AC
WINSTON-SALEM 27103 919 760-5095

EVANS, OTIS DRUELL, JR. OBG 023
110 W. GROVER STREET L/RT
SHELBY 28150 704 487-5258

EVANS, ROBERT JAMES U 041
408-A PARKWAY DR. A AC
GREENSBORO 27401 919 274-1114

EVANS, WALLACE NICKLES, II FP 092
121 EDINBURGH SOUTH, STE. 100 AC
CARY 27511 919 467-3281

EVELEIGH, DUANE HARVEY 034
2020 VIRGINIA RD. S
WINSTON-SALEM 27104 919 723-6627

EVERETT, ROY NATHAN PUD 025
PO BOX 68 A AC
POLLOCKSVILLE 28573 919 522-4094

EVERHART, CARLTON DHU FP 086
911 WORTH ST. AC
MOUNT AIRY 27030 919 786-5108

EVERHART, GEORGE RAYMOND, III FP 080
201 WOODSON AVE. A AC
SALISBURY 28144 704 637-3373

EVERHART, ROBERT G. CD 065
1202 MEDICAL CENTER DR. AC
WILMINGTON 28401 919 341-3300

EWING, JOHN ALEXANDER P 065
2311 CANTERWOOD DR. A P AC
WILMINGTON 28401 919 251-9888

EYERMAN, MELVIN FREDERIC PH 034
1244 ARBOR ROAD, 444 A * L/RT
WINSTON-SALEM 27104 919 723-7420

EYSTER, JAMES M. DR 092
1028 WASHINGTON ST. A AC
PO BOX 10956
RALEIGH 27605 919 834-8733

FADIAL, JOHN MURRAY EM 060
PO BOX 33549 A AC
CHARLOTTE 28233 704 384-5160

FAGAN, JAMES ARTHUR DR /NM 060
PO BOX 33549 AC
CHARLOTTE 28233 704 384-4056

FAGG, JOHN ANDERSON PS 034
2901 MAPLEWOOD AVENUE * AC
WINSTON-SALEM 27103 919 765-8620

FAGUNDUS, DUNCAN MCLEOD 074
210 N. EASTERN ST. A R
GREENVILLE 27858 919 758-3395

FAHEY, PHILIP JAMES IND /U 041
JEFFERSON-PILOT LIFE INS. CO. A AC
PO BOX 21008
GREENSBORO 27420 919 378-6482

FAHL, JAMES COX GS 018
24 SECOND AVENUE, N. E. A AS
HICKORY 28601 704 328-2231

FAILLACE, DEON F. GS 026
1790 METROMEDICAL DR. AC
FAYETTEVILLE 28304 919 323-2626

FAIRCLOTH, WILLIAM JOSEPH 074
97 BAYSWATER RD. S
WINTERVILLE 28590 919 355-0524

FAJARDO, AGAPITO LACSON GP 082
407 BEAMAN ST. AC
CLINTON 28328 919 592-1462

FAJGENBAUM, DAVID MONIEK ORS 092
3410 EXECUTIVE DRIVE A AC
RALEIGH 27619 919 872-5296

FALES, ROBERT MARTIN GS 065
407 W. RENOVAH CIRCLE A L/RT
WILMINGTON 28403 919 762-1285

FALK, RONALD JONATHAN NEP /IM 032
3034 OLD CLINIC BLDG./NEP. AC
UNC SCHOOL OF MEDICINE
CHAPEL HILL 27599 FAX 919 966-4251

FALLETTA, JOHN MATTHEW PHO 032
BOX 2916, DUMC AC
DURHAM 27710 919 684-3401

FALLS, DARRYL LEE OBG 016
16 MEDICAL PARK AC
MOREHEAD CITY 28557 919 726-0107

FALVO, SAMUEL CATANZARO GS /CRS 045
511 SIXTH AVENUE, WEST A AC
HENDERSONVILLE 28739 704 693-9566

FAN, JACK J. FP 051
P. O. BOX 807 AC
CLAYTON 27520 919 553-5711

FARABOW, WILLIAM SIDNEY OBG 040
400 N. ELM ST. A P AC
HIGH POINT 27262 919 889-4353

FARIS, JOHN CHARLES DR /NM 034
2803 LYNDHURST AVE. A * AC
WINSTON-SALEM 27103 919 768-1021

FARLEY, DYER JACKSON, JR. GS 055
104 DOCTOR'S PARK AC
LINCOLNTON 28092 704 735-0481

FARLEY, ROBERT HUGH GS 041
311 W. WENDOVER AVE. A AC
GREENSBORO 27408 919 275-8415

FARLEY, WILLIAM WINFREE PD 092
3814 BROWNING PLACE L
RALEIGH 27609 919 782-8326

FARMER, CHARLES DUDLEY NEP /IM 060
928 BAXTER ST. A AC
CHARLOTTE 28204 704 374-1321

FARMER, JOHN LOVELACE, JR. D 092
231 BRYAN BUILDING AC
RALEIGH 27605 919 828-0288

FARMER, JOSEPH C., JR. OTO /OT 032
DUKE, DEPT. OF SURGERY A AC
DURHAM 27710 919 684-6357

FARMER, THOMAS WOHLSEN N /IM 032
UNC SCHOOL OF MEDICINE A L
751 BURNETT-WOMACK BLDG 229-H
CHAPEL HILL 27599 919 966-2526

FARMER, WOODARD EASON IM 011
27 PARK RD. A L
ASHEVILLE 28813 704 274-0718

FARNHAM, ROBERT, III PTH 060
PO BOX 33549 A * AC
CHARLOTTE 28233 704 371-4814

FARRELL, EDWIN GAYLE PD /ADL 014
226-H MORGANTON BLVD. AC
PO BOX 1258
LENOIR 28645 704 758-5111

FARRELL, FRANK WILSON, JR. DR 034
3155 MAPLEWOOD AVENUE A AC
WINSTON-SALEM 27103 919 760-5878

FARRINGTON, CECIL MURRAY, JR. FP 080
401 MOCKSVILLE AVE. AC
SALISBURY 28144 704 637-1123
FAX 704 637-1214

FARRINGTON, JOHN KIRBY OBG 040
307 N. LINDSAY ST. A AC
HIGH POINT 27262 919 885-0149

FARUQUE, LAURA MILLER OBG 018
419 31ST AVE. CT., NE AC
HICKORY 28601 704 328-2901

FARUQUE, MARK AHMED FP 018
PO BOX 6306 A AC
BETHLEHEM STATION
HICKORY 28603 704 495-8226

FAULKENBERRY, BRADFORD K. FP 083
500-A LAUCHWOOD DR. AC
LAURINBURG 28352 919 276-2439

FAULL, CLIFFORD EDWARD ORS 050
131 ASHEVILLE HWY. A AC
3 EASTGATE CT.
SYLVA 28779 704 586-5531

FAUST, KIRK BERRY GS /VS 092
1101 DRESSER COURT AC
RALEIGH 27609 919 876-2010

FAWCETT, THOMAS ALLEN 032
910 CONSTITUTION DR. #406 R
DURHAM 27705 919 383-4569

FAX, JOHN NICHOLAS, JR. ORS 078
500 W. 27TH ST. A P AC
LUMBERTON 28358 919 739-4313

FAYEZ, JAMIL ABDEL-LATIF OBG /END 034
BOWMAN GRAY SCH. OF MEDICINE AC
WINSTON-SALEM 27103 919 748-2368

FEARRINGTON, ERIC CD /IM 074
1800 W. 5TH ST., STE. #2 AC
GREENVILLE 27834 919 752-3185

FEATHERSTON, MARK W. FP 041
1201 PAMLICO DR. R
GREENSBORO 27408 919 370-4236

FEDDER, MARC IM /ID 029
208-C W. CENTER ST. AC
P. O. BOX 557
LEXINGTON 27292 704 249-4296

FEDOR, JOHN MICHAEL CD /IM 060
1001 BLYTHE BLVD. #300 A AC
CHARLOTTE 28203 704 373-0212
FAX 704 373-1216

FEE, BRUCE EDGAR R 060
1350 S. KINGS DRIVE AC
CHARLOTTE 28207 704 342-8310

FEEZOR, CHARLES NOEL FP 080
PO BOX 4236 A L
SALISBURY 28144 704 633-1787

FEEZOR, CHARLES NOEL, JR. U 060
3535 RANDOLPH ROAD, STE. 101 AC
CHARLOTTE 28211 704 366-4631

FEHRING, THOMAS K. ORS 060
120 PROVIDENCE ROAD A AC
CHARLOTTE 28207 704 377-0351

FEIN, ALAN BRUCE DR /IM 092
3821 MERTON DR. A AC
RALEIGH 27609 919 755-8511

FELIX, RICHARD R. P /PYM 011
HIGHLAND HOSPITAL A * AC
PO BOX 1101
ASHEVILLE 28802 704 254-3201

FELKNER, RICHARD S. OTO 060
1600 E. THIRD STREET A AC
CHARLOTTE 28204 704 358-4111

FELTON, ROBERT LEE, JR. GP 063
PO BOX 57 A L
WATERFORD, VA 22190 703 882-3743

FELTS, JOHN HARVEY NEP /IM 034
BOWMAN GRAY SCH. OF MED. AC
WINSTON-SALEM 27103 919 748-4304

FENCL, RAYMOND JOHN U 086
180-0 PARKWOOD A AC
ELKIN 28621 919 526-2000

FENNING, ROBERT LAWRENCE ON /HEM 060
3535 RANDOLPH ROAD A AC
CHARLOTTE 28211 704 365-0760

FERDON, BENJAMIN BETHEA IM 092
3100 BLUE RIDGE BLVD.,#300 P AC
RALEIGH 27612 919 781-7500

FERGUSON, ALFRED LEA NEP /IM 074
6 DOCTOR'S PARK A P * AC
GREENVILLE 27834 919 752-8880

FERGUSON, BERRYLIN JUNE OTO /A 032
PO BOX 15249 A AC
3901 ROXBORO RD.
DURHAM 27704 919 479-4100

FERGUSON, BILLY LEE PD 041
614 PASTEUR DR. A P AC
GREENSBORO 27403 919 292-8240

FERGUSON, GEORGE BURTON OTO 032
1110 W. MAIN STREET A L
DURHAM 27701 919 682-9341

FERGUSON, JOHN V. OBG 079
512 MAPLE AVE. AC
REIDSVILLE 27320 919 342-6063

FERGUSON, STEPHEN DEXTER IM 049
403 E. STATESVILLE AVE. AC
MOORESVILLE 28155 704 663-4443

FERGUSON, WILLIAM CLAY GS /TS 034
2680 REYNOLDS DRIVE A AC
WINSTON-SALEM 27104 919 765-8020

FERNALD, GERALD WALLACE PD /ID 032
509 BURNETT-WOMACK, CB 7220 AC
UNC SCHOOL OF MEDICINE
CHAPEL HILL 27599 919 966-2069
FAX 919 966-7299

FERNANDEZ, CHARLES RAYMOND ID /IM 060
1350 S. KINGS DRIVE * AC
CHARLOTTE 28207 704 342-8000
FAX 704 332-7020

FERNANDEZ, GONZALO GABRIEL DR 032
3224 COACHMAN'S WAY R
DURHAM 27705 919 681-2711

FERNANDEZ, MARC EVAN 034
1516 ACADEMY ST. A R
WINSTON-SALEM 27103 919 748-2011

FERRARI, CAROLYN JEAN 034
408 WASHINGTON ST. S
PORTSMOUTH, VA 23704

FERREE, CAROLYN RUTH BLACK TR 034
300 S. HAWTHORNE RD. A P * AC
WINSTON-SALEM 27103 919 748-4981

FERREE, CHARLES ELLIOT IM 060
10512 PARK ROAD EXT. A AC
CHARLOTTE 28210 704 365-0760

FERRELL, PAUL BRENT RHU /IM 023
808 SCHENCK ST. A AC
SHELBY 28150 704 482-1482
FAX 704 482-0811

FERRELL, WM. GREGORY 092
3117 AGECROFT RD. A C
RALEIGH 27608 919 782-3456

FERRY, SENECA TAYLOR, II EM /FP 016
P. O. BOX 8 A AC
SMYRNA 28579 919 729-7831

FETTER, BERNARD FRANK PTH /DMP 032
3836 SOMERSET DR. A * L/RT
DURHAM 27707

FETTERS, MICHAEL DERWIN FP 032
NC MEM. HOSP. PO BOX 513 R
FAMILY PRACTICE CTR.
CHAPEL HILL 27599 919 966-2491

FEUER, ABE LAWRENCE OTO 036
1006 FAIRFIELD DR. L/RT
GASTONIA 28054 704 864-2222

FEWELL, JOSEPH EURANUS, JR. PS 018
415 N. CENTER ST., STE. 201 AC
HICKORY 28601 704 322-8380

FICKLEN, CONWAY HAMILTON OBG 065
PO BOX 10338 A RT
WILMINGTON 28405 919 256-3554

FIELD, BOB LEWIS FP 080
1239 W. HENDERSON ST. A L
SALISBURY 28144 704 636-0732

FIELDS, KARL BERTRAND FP 041
902 CAROLINA ST. A AC
GREENSBORO 27401 919 379-4133

FIGLESTHALER, WILLIAM MATTHEW 032
113 COLERIDGE COURT S
CARRBORO 27510 919 942-2723

FIGUEROA, ELIZABETH PD 074
ECU SCHOOL OF MEDICINE AC
DEPT. OF PEDIATRICS
GREENVILLE 27858 919 551-2535

FINA, MICHAEL FRANCIS GE /IM 034
1901 S. HAWTHORNE RD., #310 A AC
WINSTON-SALEM 27103 919 760-4340
FAX 919 765-2869

FINCH, MICHAEL ALAN 074
3206 BRASSWOOD CT. #4 A S
GREENVILLE 27834

FINCHER, ROBERT CHARLES, JR. P /PH 040
107 SPENCER STREET A * L/RT
HIGH POINT 27265 919 883-8914

FINDLAY, JEAN MARJORIE HEY PD 032
14 CLEARWATER DR. AC
DURHAM 27707 919 286-2202

FINESTONE, DOUGLAS HOWARD P /PYA 074
ECU SCHOOL OF MED. AC
DEPT. OF PSYCHIATRY
GREENVILLE 27858 919 551-2986

FINGER, FREDERICK ELI, III NS 060
1010 EDGEHILL RD. NORTH A P AC
CHARLOTTE 28207 704 376-1605
FAX 704 335-8448

FINK, EMMA SLOOP FP 006
BOX 426 A L
CROSSNORE 28616 704 733-4367

FINK, GARY LEE IM /EM 080
BROWN ST., P. O. BOX 610 AC
FAITH 28041 704 279-8329

FINKLEA, LEE KILPATRICK PD 034
250 CHARLOIS BLVD. AC
WINSTON-SALEM 27103 919 768-4730

FINKLEA, ORION TOWNSEND U 060
1333 ROMANY ROAD AC
CHARLOTTE 28204 704 372-5180

FINLEY, CHARLES DAVID 074
1-B GREENRIDGE APTS. A S
GREENVILLE 27834 919 752-7129

FINLEY, JAMES LEO PTH 074
DEPT. OF CLI. PTH. BRODY 1F79 A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4495

FINN, RICHARD CONNELL OBG 034
250 CHARLOIS BOULEVARD AC
WINSTON-SALEM 27103 919 768-4730

FIORILLI, MARIO GRAZIA ID /IM 042
220 SMITH CHURCH ROAD AC
ROANOKE RAPIDS 27870 919 535-3001

FISCHER, GARY JAY DR 041
P. O. BOX 13005 A AC
GREENSBORO 27415 919 379-4140

FISCHER, JANET JORDAN ID /IM 032
N. C. MEMORIAL HOSPITAL AC
UNC CB 7030
CHAPEL HILL 27599 919 966-2536

FISCHER, JOSEPH WILLIAM R 065
4608 CEDAR ST., STE. 112 A AC
WILMINGTON 28403 919 395-4668

FISCHER, MARTIN JOSEPH TS /GS 011
520 BILTMORE AVENUE AC
ASHEVILLE 28801 704 252-7357

FISCHER, NEWTON D. OTO /HNS 032
UNC SCHOOL OF MEDICINE AC
CHAPEL HILL 27599 919 966-3341

FISH, HARRY GUSTAV, JR. GS 064
100 NASH MEDICAL ARTS MALL A L/RT
ROCKY MOUNT 27801 919 443-9084

FISHER, CARL ELLIS PD 036
902-C COX ROAD A AC
GASTONIA 28054 704 867-5356

FISHER, DAVID GEORGE PD /NPM 060
PO BOX 32861 A AC
CAROLINAS MED. CTR.
CHARLOTTE 28232 704 355-3156

FISHER, DAVID RUSSELL R 026
127 THORNCLIFF DR. AC
FAYETTEVILLE 28305 919 323-2012

FISHER, EARL ELLIOTT, JR. PD 098
1700 S. TARBORO STREET A AC
WILSON 27893 919 399-2277

FISHER, EDWARD CARL OBG 060
449 N. WENDOVER RD. * AC
CHARLOTTE 28211 704 373-1541

FISHER, ERNEST WOODROW FP 056
102 GEORGIA ROAD A L/RT
FRANKLIN 28734 704 524-5752

FISHER, JOHN APFEL PD 096
104 CASHWELL DR. AC
GOLDSBORO 27534 919 830-3426

FISHER, MARSHALL LOUIS P 060
140 E. 83RD ST., APT. 11-C L/RT
NEW YORK, NY 10028 212 535-8747

FISHER, OTIS NORWOOD R 041
P. O. BOX 13005 A AC
GREENSBORO 27415 919 379-4360

FISHER, ROBERT H. AI /IM 074
DEPT. OF MED/ALLERGY A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2562

FISHER, SAMUEL RANKIN HNS /OTO 032
BOX 3805, DUMC A AC
DURHAM 27710 919 684-4201
FAX 919 684-4611

FISHER, WILLIAM SLOAN, III OTO 034
175 CHARLOIS BLVD. STE. 101 A AC
WINSTON-SALEM 27103 919 768-3361

FISHMAN, JOHN JAY AN 065
1227 MEDICAL CTR. DR. AC
WILMINGTON 28401 919 395-1150

FISSCHER, ROLF HENDRIK P /N 065
2023 S. 17TH ST. AC
WILMINGTON 28401 919 343-0151

FITCH, DUANE DOUGLAS GE /IM 098
1704 S. TARBORO ST. A AC
WILSON 27893 919 291-7001

FITCH, ROBERT DOUGLAS ORS /PDS 032
BOX 2911, DUMC A AC
DURHAM 27710 919 684-3104

FITZ, THOMAS EDMUNDS IM /CD 018
2133 9TH ST. NW L/RT
HICKORY 28601 704 324-6346

FITZGERALD, DWIGHT MELVIN GS /TS 018
ROUTE #2, BOX 196 AC
CONOVER 28613 704 322-8485

FITZGERALD, JOHN HILL GP /PD 055
626 CLARK DRIVE A L
LINCOLNTON 28092 704 735-8257

FITZGERALD, ROBERT GREESON GP 073
P. O. BOX 856 A L/RT
ROXBORO 27573 919 599-1131

†FITZPATRICK, JOHN FRANCIS PTH /IM 076
RANDOLPH PATHOLOGY A L/RT
P. O. BOX 1948
ASHEBORO 27203 919 629-3282

FLANAGAN, TONY E. OBG 092
3020 NEW BERN AVE., STE. 460 AC
RALEIGH 27610 919 821-1440

FLANNELLY, CHRISTINA MARIE 032
108-D WEATHERSTONE DR R
CHAPEL HILL 27514 919 966-4131

FLANNERY, JOHN EDWARD IM 077
BOX 1537 A AC
ROCKINGHAM 28379 919 582-0004

FLEISHMAN, HENRY ARNOLD GS /CD 079
515 THOMPSON ST., STE. B AC
EDEN 27288 919 623-9118

FLEISHMAN, LAWRENCE MARK IM 060
7110 LAWYER'S ROAD AC
CHARLOTTE 28227 704 568-6500

FLEISHMAN, MALCOLM IM /CD 026
P. O. BOX 35126 * AC
FAYETTEVILLE 28303 919 484-0144

FLEISHMAN, STEPHEN BAER P /CHP 026
2619 TORCROSS DR. A P AC
CUMBERLAND MENTAL HEALTH DEPT.
FAYETTEVILLE 28304 919 323-0601

FLEMING, BARBARA BURCH IM 092
2904 AUGUSTA CT. A * AC
RALEIGH 27607 919 733-7081

FLEMING, CHRISTOPHER PAUL OPH 078
202 W. 28TH ST. A * AC
LUMBERTON 28358 919 739-0606
FLEMING, DUARD FRANCIS, JR. N 074
2501 STANTONSBURG RD. AC
GREENVILLE 27834 919 752-4848
FAX 919 792-0476
FLEMING, GEORGE EDWARD AN 042
PO BOX 190 A AC
ROANOKE RAPIDS 27870 919 535-8185
FLEMING, LAURENCE EDWIN ABS 060
1116 PROVIDENCE ROAD A L/RT
CHARLOTTE 28207 704 332-6896
FLEMING, ROBERT HENRY PD 092
2800 BLUE RIDGE BLVD.,STE 501 A AC
RALEIGH 27607 919 781-7490
FLEMING, STEPHEN G. ORS 095
30 DOCTORS PARK A AC
BOONE 28607 704 264-1100
FLEMING, WILLIAM LEROY GPM /IM 032
UNC, DEPT. OF FAMILY MED. A L/RT
CHAPEL HILL 27599 919 966-5744
FLETCHER, RICHARD VAN, JR. GYN 040
721 N. ELM ST., STE. 102 AC
HIGH POINT 27262 919 889-8900
FLETCHER, ROBERT GEORGE OM /FP 034
401 N. MAIN STREET A AC
WINSTON-SALEM 27102 919 741-3024
FLETCHER, ROBERT HILLMAN IM /PH 032
UNC, DEPT. OF MEDICINE AC
CHAPEL HILL 27599 919 966-1274
FLETCHER, SUZANNE WRIGHT IM /PH 032
UNC, DEPT. OF MEDICINE AC
CHAPEL HILL 27599 919 966-2276
FLEURY, ROBERT ANDRE P /ALD 063
PO BOX 56 A * AC
SOUTHERN PINES 28387 919 692-6471
FLIPPO, TERESA SKIDMORE 060
5608 ALEXA RD. R
CHARLOTTE 28226 704 355-3176
FLOOD, ROY DEVONNE FP 008
BOX #7, SPRING BRANCH ROAD AC
MURFREESBORO 27855 919 398-3323
FLORES, RODOLFO FLORES FP /IM 034
P. O. BOX 96 A AC
DANBURY 27016 919 593-8281
FLOURNOY, JOHN EPPES R 054
KINSTON CLINIC, NORTH A AC
DOCTORS DRIVE
KINSTON 28501 919 527-7077
FLOWE, BENJAMIN HUGH GS /TS 013
56 LAKE CONCORD ROAD, N.E. A P AC
CONCORD 28025 704 786-1105
FLOYD, ANDERSON GAYLE GP 024
302 N. THOMPSON STREET L/RT
WHITEVILLE 28472 919 642-2150
FLOYD, HERBERT MYNATT AN 034
3551 BUENA VISTA ROAD A AC
WINSTON-SALEM 27106 919 748-8611
FLOYD, WALTER LAWRENCE CD /IM 032
BOX 2997, DUMC AC
DURHAM 27710 919 684-2845
FLYTHE, WILLIAM HENRY IM 040
201 GREENSBORO RD., BOX 212 A L
HIGH POINT 27260 919 882-8933
FOGLEMAN, ROSS LEE, JR. FP 054
KINSTON CLINIC AC
KINSTON 28501 919 527-7194
FOIL, MARY BETH GS 074
DEPT. OF SURGERY A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858
FOLDS, WILLIAM FRANKLIN FP 034
2909 MAPLEWOOD AVE. AC
WINSTON-SALEM 27103 919 768-9575
FOLGER, JOHN RUSSELL, JR. FP /PH 088
101 WATER OAK SUITES A AC
BREVARD 28712 704 966-9633
FOLLMER, RONALD LESTER N 060
PO BOX 32861 A AC
CHARLOTTE 28232 704 355-4053
FOLLO, PAIGE BILL PD 041
1209 MAGNOLIA STREET A * AC
GREENSBORO 27401 919 273-2879
FONTAINE, TIMOTHY PAUL OBG 041
721 GREEN VALLEY RD., STE. 300 A AC
GREENSBORO 27408 919 275-5391
FONTRIER, TOINETTE HELEN AN 034
8220 WHITE WATER DR. A AC
CLEMMONS 27012 919 766-4321
FOOTE, MARGARET J.G. FP /GP 032
2473 FOXWOOD DR. AC
CHAPEL HILL 27514 919 933-9932
FORAUER, ANDREW R. 034
2230 SUNDERLAND RD. #35E A S
WINSTON-SALEM 27103 919 765-2970
FORBES, JOSEPH DAVIDSON 034
431-L PARK RIDGE LN. R
WINSTON-SALEM 27104
FORBES, MARY J. 032
602 1/2-B S. COLUMBIA ST. S
CHAPEL HILL 27514 919 942-4789
FORBES, THOMAS EARL FP 079
P. O. BOX 659 A L/RT
REIDSVILLE 27320 919 349-5324
FORD, C. STEPHEN N 040
624 QUAKER LN., STE. 206C A P AC
HIGH POINT 27262 919 885-2422
FORD, CHARLES PHILLIP, JR. OM 054
5216 EMERALD DR. A L/RT
EMERALD ISLE 28594 919 354-3018
FORD, MARSHA DEAN EM /IM 060
1313 CEDAR LANE A AC
CHARLOTTE 28226 704 355-3181
FORD, ROBERT VIRGIL, JR. PD 034
3175 MAPLEWOOD AVENUE A AC
WINSTON-SALEM 27103 919 768-7030
FORDHAM, CHRISTOPHER C., III IM /NEP 032
522 MORGAN CREEK RD. A AC
CHAPEL HILL 27514 919 929-6946
FORE, STEVEN RONALD OBG 041
721 GREEN VALLEY RD.,STE. 300 A P AC
GREENSBORO 27408 919 275-5391
FOREHAND, BILLIE J. 032
30 SPRING GARDEN APTS. A S
CHAPEL HILL 27514
FOREHAND, MARY L. PD 065
1628 DOCTORS CIR. A AC
WILMINGTON 28401 919 763-2476
FOREMAN, ARTHUR S. AN 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 724-4210
FOREMAN, FRANK LEROY D 049
550 BROOKDALE DR. AC
STATESVILLE 28677 704 873-0545
FOREMAN, ROBERT HUGH FP 041
603 DOLLY MADISON RD. * AC
GREENSBORO 27410 919 294-6190
FOREMAN, SUSAN DOWNER PD 074
300 BETHESDA DR. AC
GREENVILLE 27834 919 752-7141
FOREST, KARA MICHELLE P 032
113 SNOWCREST TRAIL A R
DURHAM 27707 919 489-6562
FORGY, BYRON KEITH GS 012
341 E. PARKER ROAD AC
MORGANTON 28655 704 433-6390
FAX 704 438-8589
FORHAN, SARA ELLEN OBG 041
301 E. WENDOVER AVE. A AC
GREENSBORO 27401 919 273-2835
FAX 919 274-4594
FORREST, TERRY LEE OPH 096
PO BOX 10907 AC
GOLDSBORO 27532 919 734-8440
FORREST, WILLIAM WOMBLE PTH 041
WESLEY LONG HOSPITAL A S/RT
P. O. DRAWER X-3
GREENSBORO 27402 919 854-6463
FORRESTER, JAMES SUMMERS FP /GPM 036
P. O. BOX 459 A AC
STANLEY 28164 704 263-4716
FORSBERG, DAVID A. 032
1601 CLIFF ST. R
DURHAM 27707 919 681-2711
FORSHEY, ALAN GRAY FP 018
105-B SOUTH MAIN AC
NEWTON 28658 704 465-3928
FORSTNER, JAMES ROBERT FP 010
250 E. 11TH ST. A AC
SOUTHPORT 28461 919 457-9564
FORT, LYNN, III GS /TS 060
3535 RANDOLPH ROAD, 201-W AC
CHARLOTTE 28211 704 364-8100
FORT, WILKINSON DAVIS OBG 084
1000 N. FIFTH STREET A * AC
ALBEMARLE 28001 704 982-8112
FORTIER, KENNETH JOSEPH OBG 092
4420 LAKE BOONE TR., STE. 303 A AC
RALEIGH 27607 919 781-5513
FORTNEY, AUSTIN POWELL IM 040
P. O. BOX 579 A AC
JAMESTOWN 27282 919 454-3151
FORTNEY, JENNIFER TAYLOR AN 032
BOX 3094, DUMC A * AC
DURHAM 27710 919 684-2945
FORTNEY, SIDNEY RAY IM /END 013
68 LAKE CONCORD ROAD, N.E. A AC
CONCORD 28025 704 782-3135
FORTUNE, ALEXANDER F. AN 041
1816 PEMBROKE RD., STE. 2 AC
GREENSBORO 27408 919 272-3720
FORTUNE, BENJAMIN FLETCHER AN 041
906 W. CORNWALLIS DRIVE A L/RT
GREENSBORO 27408 919 272-7755
FOSTER, BOB MAXWELL FP 034
P. O. BOX 427 * AC
MOCKSVILLE 27028 704 634-2108
FOSTER, JAMES ROBERT CD 092
WAKE HEART ASSOCIATES AC
PO BOX 14427
RALEIGH 27620 919 231-8253
FOSTER, JOHN THOMAS OPH 018
P. O. BOX 2588 AC
HICKORY 28603 704 322-2050
FOSTER, MARK DUPREE ORS 065
2001 S. 17TH ST. * AC
WILMINGTON 28401 919 763-7344
FOSTER, MARSHALL SHANE 034
2006 SHERWOOD DR. A S
WINSTON-SALEM 27103 919 725-2725
FOSTER, WILLIAM LEICESTER, JR. R 032
DUMC, DEPT. OF RADIOLOGY A AC
DURHAM 27710 919 286-0411
FOSTER, WILLIAM WADE OPH 092
3320 EXECUTIVE DR., STE. 111 A P AC
RALEIGH 27609 919 876-2427
FOULKS, GARY NEAL OPH 032
BOX 3802, DUKE UNIV. EYE CTR. AC
DURHAM 27710 919 684-6417
FAX 919 684-2230
FOUNTAIN, MARTHA TOY PD 014
FOOTHILLS PEDIATRICS AC
226-H MORGANTON BLVD.
LENOIR 28645 704 758-5111
FOUSHEE, J. HENRY SMITH, JR. PTH 034
718 FORSYTH MEDICAL PARK A AC
WINSTON-SALEM 27103 919 768-2351
FOUSHEE, JOHN CALDWELL GS 053
1710 CARTHAGE ST. A L/RT
SANFORD 27330 919 775-7146
FOUST, JOHN WORTH OT 060
3535 RANDOLPH RD., STE. R210 * AC
CHARLOTTE 28211 704 365-0711
FAX 704 366-3562
FOWLER, JOHN ALVIS PYA /CHP 032
2721 SPENCER ST. L/RT
DURHAM 27705 919 489-5339
FOWLER, LARRY JOHN PTH /IM 032
333 WESLEY DR. R
CHAPEL HILL 27516 919 966-4334
FOWLER, VANCER GARRISON, II 032
PO BOX 58246 A S
FAYETTEVILLE 28305
FOWLER, WILLIAM BRIGHT IM 011
675 BILTMORE AVENUE A AC
ASHEVILLE 28803 704 252-1830
FOWLER, WILLIAM EDWARD FP 074
303 LOBLOLLY CIR. S
GREENWOOD, SC 29649 803 229-4966
FOX, EARL RUSSELL RHU /IM 070
1515 JEFFERSON-DAVIS HIGHWAY AC
APT. 517
ARLINGTON, VA 22202 609 884-6391
FOX, ELISABETH JUNE AN 032
BOX 3083, DUMC AC
DURHAM 27710 919 681-3560
FOX, JOE THOMAS, JR. P 060
1900 RANDOLPH ROAD AC
CHARLOTTE 28207 704 333-7722
FAX 704 333-7728

FOX, JONATHAN C. IM /CD 032
BOX 3163, DUMC R
DURHAM 27710 919 684-8111

FOX, POWELL GRAHAM, JR. U 092
PO BOX 28280 S/RT
RALEIGH COMMUNITY HOSP.
RALEIGH 27611 919 790-0036

FOX, RAYMOND MORRIS, JR. ALD /ADM 067
215 MEMORIAL DR. AC
JACKSONVILLE 28546 919 353-5118

FOX, RICHARD FRANKLIN NEP /IM 041
111 W. WENDOVER AVE. P AC
GREENSBORO 27401 919 379-9708
FAX 919 379-8714

FOY, DAVID MARK FP 011
N-1 DOCTOR'S DR. AC
ASHEVILLE 28801 704 252-8885

FRAASA, ROBERT CONRAD FP 060
4441 HEDLEY WAY #307 A L/RT
CHARLOTTE 28210 704 366-9444

FRANCIS-LANE, MILLICENT A. OBG 090
1303 DOVE ST. AC
MONROE 28110 704 289-8129

FRANCIS, JOHN ARLIE OBG 021
PO BOX 990 AC
EDENTON 27932 919 482-7407

FRANCIS, RICHARD PAUL GP /GS 002
325 THIRD ST., SW AC
TAYLORSVILLE 28681 704 632-4183

FRANCIS, ROBERT DEAN ORS /HS 045
1027 FLEMING STREET A AC
HENDERSONVILLE 28739 704 692-5781

FRANK, JAMES LAWRENCE ORS 032
1828 HILLANDALE ROAD A AC
DURHAM 27705 919 286-1249

FRANK, JEFFREY H. N 040
606 N. ELM ST. A AC
HIGH POINT 27262 919 889-8877

FRANK, JOE LEE, JR. R 008
PO BOX 1387 A P L
AHOSKIE 27910 919 332-2390

FRANKEL, NICHOLAS DR /NR 018
BOX 308 A AC
HICKORY 28603 704 322-2644
FAX 704 327-2235

FRANKLIN, EARL RUFFIN PD 092
3803-A COMPUTER DR. AC
RALEIGH 27609 919 782-5273

FRANKLIN, SAMUEL C., JR. 032
4026 CHAPRA DR. A S
WILMINGTON 28403 919 791-0484

FRASER, DONALD DOYLE D 060
1901 BRUNSWICK AVE. STE. 240 A AC
CHARLOTTE 28207 704 377-3299

FRASER, HELEN R. 060
4116 POMFRET LANE A AC
CHARLOTTE 28211

FRASER, HUGH ERSKINE, JR. D 041
1030 PROFESSIONAL VILLAGE A AC
GREENSBORO 27401 919 373-1383

FRASER, ROBERT WELLINGTON, III TR 060
421-0 SHARON-AMITY RD. A AC
CHARLOTTE 28211 704 355-2272

FRAZER, JOE WALTON, III EM 011
114 GIBSON RD. AC
ASHEVILLE 28804 704 255-4070

FRAZIER, ARNOLD RAY CCM /IM 060
CAROLINAS MEDICAL CENTER A AC
P. O. BOX 32861
CHARLOTTE 28232 704 331-2121

FRAZIER, CLAUDE ALBEE A 011
DOCTOR'S PARK A L
ASHEVILLE 28801 704 254-1650

FRAZIER, HAROLD NICHOLS, JR. GS /VS 095
WATAUGA SURGICAL GROUP, PA A AC
STATE FARM RD.
BOONE 28607 704 264-2340

FRAZIER, RICHARD ELLIS FP 042
120 PROFESSIONAL DRIVE AC
ROANOKE RAPIDS 27870 919 537-9176

FREDERICK, CHARLES E. AN 041
612 WAYCROSS DR. A AC
GREENSBORO 27410 919 299-6333

FREDRICKSON, DOREN DALE PD /PH 032
UNC, BOX 7225 A R
COMMUNITY PEDIATRICS
CHAPEL HILL 27599 919 966-2505

FREEDMAN, BARRY IRA IM /NEP 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-2097

FREEDMAN, DOUGLAS MARC ORS 032
214-13 CONNER DR. R
CHAPEL HILL 27514 919 932-9023

FREEDMAN, STEVEN MITCHELL N 092
PO BOX 40999 AC
RALEIGH 27629 919 782-3456

FREEMAN, DAVID FRANKLIN PYA /CHP 032
ASHE PLACE AC
CHAPEL HILL 27514 919 942-4867

FREEMAN, DOUGLAS G., JR. RHU /AI 092
3831 MERTON DRIVE AC
RALEIGH 27609 919 781-9633

FREEMAN, GEORGE HARTLEY OBG 074
2245 STANTONSBURG RD. STE. H A AC
GREENVILLE 27834 919 757-3131

FREEMAN, JOHN JACKSON OBS /GYN 095
907 STATE FARM RD. AC
BOONE 28607 704 264-9208

FREEMAN, NANCY ROUSER FP 044
PO BOX 1409 AC
CANTON 28716 704 627-2211

FREEMAN, PERCY LEE U 036
5245 MALLARD PT. ROAD L/RT
LAKE WYLIE, SC 21704 803 831-8598

FREEMAN, WILLIAM HARRISON GS 084
P. O. DRAWER 1398 L/RT
ALBEMARLE 28001 704 982-0161

FREI, TIMOTHY EDWARD IM 008
AHOSKIE MEDICAL ASSOC., INC. AC
PO BOX 340
AHOSKIE 27910 919 332-4155
FAX 919 332-6527

FREIBERGER, JOHN JACOB AN /CC 032
830 KENMORE RD. * AC
CHAPEL HILL 27514 919 470-4000

FRENCH, THOMAS NASH U 083
LAURINBURG SURGICAL CLI. AC
PO BOX 1808
LAURINBURG 28353 919 276-3541

FRENCH, WHITNEY JAMES IM 034
3310 BROOKVIEW HILL BLVD. AC
SUITE 203
WINSTON-SALEM 27103 919 765-9631

FRICK, DONNA ELLIOTT P 032
109 CONNER DR.,BLDG #3,STE.203 AC
CHAPEL HILL 27514 919 933-5600

FRIED, FLOYD ALAN U 032
UNC, DEPT. OF SURGERY A AC
CHAPEL HILL 27599 919 966-2571
FAX 919 966-6009

FRIED, MICHAEL DAVID OBG 032
120 CONNER DR., STE. 101 AC
PO BOX 3317
CHAPEL HILL 27514 919 544-3591

FRIEDLAND, BETH ROSENTHAL OPH /PA 092
10 PARK PLAZA,STE. 3 A AC
PO BOX 12765
RESEARCH TRIANGLE PK 27709 919 549-9135

FRIEDLAND, EDWARD L. NEP /IM 060
2321 W. MOREHEAD ST., STE. 101 AC
CHARLOTTE 28208 704 847-0157
FAX 704 333-3862

FRIEDMAN, ALAN DAVID U 011
100 VICTORIA ROAD A AC
ASHEVILLE 28801 704 254-8883

FRIEDMAN, ALLAN HOWARD NS 032
BOX 3807, DUMC A AC
DURHAM 27710 919 681-6421

FRIEDMAN, EDNA CHARNEY 018
5161 COLLINS AVE., APT. 412 A L
MIAMI BEACH, FL 33140 305 864-2880

FRIEDMAN, MITCHELL PUD /IM 032
DIV. OF PULMONARY DISEASES AC
UNC, DEPT. OF MEDICINE
CHAPEL HILL 27599 919 966-2532

FRIEDMAN, PATRICIA ANN PD 032
DEVELOPMENTAL EVAL. CTR. AC
3040 ERWIN RD.
DURHAM 27705 919 383-3332

FRIEDRICH, THOMAS CHARLES ORS 060
1104 OAK HILL DR. AC
MONROE 28110 704 289-4595

FRITZ, RICHARD THOMAS R 064
PO BOX 88 AC
RED OAK 27868 919 443-8083

FROEDGE, JERRY KEITH PD 018
240 18TH STREET CIRCLE, SE AC
HICKORY 28602 704 322-2550

FROELICH, MARY E. 032
21 BLUFF TRAIL R
CHAPEL HILL 27516 919 966-4131

FROHBOSE, FREDERICK ALEXANDER U 000
368 HABERSHAM RD. A R
AUGUSTA, GA 30907 404 724-0211

FROHBOSE, WILLIAM JOSEPH U 064
212 PIEDMONT AVENUE A L/RT
ROCKY MOUNT 27801 919 443-3136

FROMSON, GERALD ALAN IM 034
250 CHARLOIS BOULEVARD AC
WINSTON-SALEM 27103 919 768-4730

FRUCHT, DAVID MARTIN 032
3611 UNIVERSITY DR. #13N S
DURHAM 27707 301 292-1387

FRY, JOHN RUDOLPH OPH 011
20/20 PLAZA A AC
90 ASHELAND AVENUE
ASHEVILLE 28801 704 253-5656

FRYAR, MEL WEBSTER OBG 082
400 COOPER DR. AC
CLINTON 28328 919 592-1414

FRYE, JOSEPH CRAIG R 060
CHARLOTTE RADIOLOGY A AC
PO BOX 36937
CHARLOTTE 28236 704 365-0343

FUCHS, HERBERT EDGAR 032
4006 LIVINGSTONE PL. R
DURHAM 27707 919 493-2705

FULBRIGHT, DEBORAH KAY PTH 096
WAYNE MEMORIAL HOSPITAL A C
PO BOX 8001
GOLDSBORO 27533 919 735-1530

FULCHER, WILLIAM L., III FP 054
PO BOX 658 C
SNOW HILL 28580 919 747-2921

FULGHUM, JAMES SPENCER, III NS 092
3009 NEW BERN AVE. AC
PO BOX 14027
RALEIGH 27610 919 832-4448

FULGHUM, MARY SUSAN KIRK GYN 092
REX HOSPITAL BIRTH CENTER AC
4420 LAKE BOONE TR., STE. 302
RALEIGH 27607 919 832-5529

FULK, ROBERT VERNON, JR. OTO 065
2311 DELANEY AVENUE AC
WILMINGTON 28403 919 762-8754

FULLER, CORODON S., JR. PH /GP 097
RT. #1, BOX 61 L/RT
MORAVIAN FALLS 28654 919 838-3334

FULLER, WAYNE TEMPLETON FP 026
1601-B OWEN DR. A AC
FAYETTEVILLE 28305 919 323-1152

FULP, SAM RUSSELL GE /IM 060
3535 RANDOLPH RD., STE. 300 A C
CHARLOTTE 28211 704 365-0760

FULTON, JAMES WALKER OBG 040
400 N. ELM ST. A AC
HIGH POINT 27260 919 889-4353
FAX 919 889-5804

FUNDERBURK, AMON LEX IM /END 034
250 EXECUTIVE PARK BLVD. AC
PARK CENTER, SUITE 115
WINSTON-SALEM 27103 919 768-2370
FAX 919 768-2375

FURMAN, JEFFREY WILLIAM FP /HYP 032
120 CONNER DR., STE. 200 AC
CHAPEL HILL 27514 919 967-8291

FURMAN, LOWELL BENJAMIN GS /CDS 095
STATE FARM ROAD A AC
BOONE 28607 704 264-2340

FURMAN, RICHARD WARREN TS /GS 095
702 STATE FARM ROAD A AC
BOONE 28607 704 264-2340

FURR, CARL AUGUSTUS, JR. OBG 013
1054 BURRAGE ROAD, N. E. A AC
CONCORD 28025 704 788-4151

FURR, WILLIAM STEPHEN ORS 000
3257 ALTRURIA RD. A R
BARTLETT, TN 38134 901 382-7999

FURTH, EUGENE DAVID IM /END 074
DEPT. OF MEDICINE A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2570

FUSSELL, FITZHUGH LEE, JR. GP 042
120 PROFESSIONAL DRIVE AC
ROANOKE RAPIDS 27870 919 537-9176

FUTRELL, THOMAS MILTON FP 029
201 W. HOLLY HILL ROAD A AC
THOMASVILLE 27360 919 475-9164

GABLE, RONALD SELMAN OPH 013
33 LAKE CONCORD ROAD, N.E. * AC
CONCORD 28025 704 786-2015

GABLE, WALTER DELAY PTH /FOP 067
ONSLOW MEMORIAL HOSPITAL A AC
JACKSONVILLE 28540 919 353-7803

GABRIEL, DON ALEXANDER HEM /ON 032
UNC, DIV. OF HEM/ONCOLOGY AC
CHAPEL HILL 27599 919 966-4640

GABY, NANCY SUE P 034
3000 BETHESDA PL., STE. 101 A AC
WINSTON-SALEM 27103 919 765-9750

GACHET, FRED SMITH, JR. GYN 018
1205 N. CENTER STREET A AC
HICKORY 28601 704 328-2901
FAX 704 328-3882

GADA, PRESTON HERBERT GS /TS 092
2800 BLUE RIDGE BLVD. AC
SUITE 305-2
RALEIGH 27607 919 781-7412

GADD, DUWAYNE DOUGLAS U 063
PINEHURST SURGICAL CLINIC A S/RT
PINEHURST 28374 919 295-0252

GADDY, JOE ELLIS, JR. CD /IM 034
3073 TRENWEST DR. A AC
WINSTON-SALEM 27103 919 768-0437

GADDY, ROBERT EDWIN, JR. IM /CD 092
3900 BROWNING PLACE AC
RALEIGH 27609 919 781-9650

GAGE, JENNIFER CERNY 032
311 S. LASALLE ST., APT. 21-I S
DURHAM 27705 919 383-8230

GAGE, LAWRENCE E. IM /CD 025
EASTERN CAROLINA IM, PA A AC
532 WEBB BLVD.
HAVELOCK 28532 919 224-4591

GAGE, LUCIUS GASTON, JR. A /RHU 060
1350 S. KINGS DRIVE A L/RT
CHARLOTTE 28207 704 372-8750

GAGLIANO, LOUIS ANTHONY P /GER 096
P. O. BOX 1975 A AC
GOLDSBORO 27530 919 734-8604

GAGLIANO, MARTHA ELLEN PD 032
2609 N. DUKE ST., STE. 801 A AC
DURHAM 27704 919 477-3434

GAGNON, GREGORY ARTHUR PTH 074
DEPT.OF CLI. PTH/DIAG. MED. A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4495

GAINES, GARY LEE OBG 067
1703 COUNTRY CLUB RD., STE.203 AC
JACKSONVILLE 28540 919 346-2182

GAINES, IRA LEWIS OBG 092
4420 LAKE BOONE TR., STE. 304 AC
RALEIGH 27607 919 781-2500

GAINEY, JOHN WHITE, JR. GP 016
P. O. DRAWER 97 AC
MOREHEAD CITY 28557 919 726-3406

GAINOR, CHARLES JOSEPH FP 034
147 COLUMBINE DR. AC
WINSTON-SALEM 27103 919 722-9535

GAITHER, JAMES COMER IM 018
ROUTE #2, BOX 199 AC
CONOVER 28613 704 322-1128

GAITHER, ROBERT HUTH OBG 084
1000 N. FIFTH STREET A AC
ALBEMARLE 28001 704 982-8112

GALENTINE, PAUL GUY, III OPH 060
2620 E. 7TH ST. #300 AC
CHARLOTTE 28204 704 364-8576

GALFO, MARK STEPHEN FP 096
409 PLANTATION PL. AC
GOLDSBORO 27534 919 736-5172

GALLAGHER, EDGAR GIVENS, JR. GS /TS 067
1013 SCHALL PLACE AC
JACKSONVILLE 28540 919 353-7848

GALLAGHER, JOHN JOSEPH CD /IM 060
1001 BLYTHE BLVD. #300 A AC
CHARLOTTE 28203 704 373-1503

GALLAGHER, KATHLEEN A. DR 013
651 CHURCH ST., NORTH A AC
CONCORD 28025 704 786-0214

GALLAGHER, TIMOTHY JOSEPH DR 011
P. O. BOX 2959 A AC
103 DOCTOR'S BUILDING
ASHEVILLE 28802 704 255-4167

GALLAHER, ROBERT THOMAS IM /PUD 054
313 AIRPORT RD. AC
KINSTON 28501 919 522-3072

GALLEMORE, WARREN GHOLSON IM 040
P. O. BOX 5904 A AC
HIGH POINT 27262 919 841-2114

GALLIS, HARRY ANTHONY ID /IM 032
BOX 3306, DUKE HOSPITAL AC
DURHAM 27710 919 684-3279

GALLOWAY, JAMES BRUCE ORS 011
GALLOWAY DR. L/RT
ASHEVILLE 28803 704 274-2236

GALLOWAY, JAMES HERVEY FP 092
2617 ROYSTER ROAD A L/RT
RALEIGH 27608 919 781-7547

GALLUP, KENNETH RAYNOR, JR. PUD /CC 034
3001 LYNDHURST AVE. A AC
WINSTON-SALEM 27103 919 765-0888

GALPHIN, CLAUDE MABRY NEP 074
123 ROBIN ROAD AC
GREENVILLE 27858 919 522-5725

GALUSZKA, ALBIN ADOLPH U 007
604 E. 12TH STREET A L/RT
WASHINGTON 27889 919 946-0136

GAMBILL, NEIL BRENTLEE 034
438 S. HAWTHORNE RD. APT. D S
WINSTON-SALEM 27103

GAMBLE, ELIZABETH RHODES IM /GER 074
607 WINSTEAD RD. AC
GREENVILLE 27834 919 756-7901

GAMBLE, JOHN REEVES, JR. GS /GP 055
P. O. BOX 250 P * AC
LINCOLNTON 28092 704 735-3023

GAMBLE, WILLIAM HEDRICK CD /IM 041
920 CHERRY ST. A AC
GREENSBORO 27401 919 273-7900
FAX 919 275-0433

GAMMON, WALTER RAY D 032
404 WHITEHEAD CIRCLE AC
CHAPEL HILL 27514 919 966-3322

GANGAROSA, LISA M. 032
1713 JAMES ST. A * S
DURHAM 27707 919 493-9583

GANGOO, ABDUL RASHID ID 023
810 W. KING STREET AC
KINGS MOUNTAIN 28086 704 739-8946

GANT, JAMES CURTIS PD 067
118-C MEMORIAL DR. A AC
JACKSONVILLE 28546 919 335-6262

GANTT, CHARLES BERNARD, JR. DR 053
1606 LORD ASHLEY DR. A * AC
SANFORD 27330 919 775-2234

GARBER, EDGAR CLYDE, JR. GYN 026
1810 LAKE SHORE DR. * L/RT
FAYETTEVILLE 28305 919 484-6474

GARBER, RONALD LEWIS NEP /IM 041
111 W. WENDOVER AVE. P AC
GREENSBORO 27401 919 379-9708

GARCIA, FRANK GEORGE 074
119 FOX CHASE LANE A S
WINTERVILLE 28590 919 321-1679

GARCIA, GILBERT JOSEPH, JR. GS /VS 096
1008 E. ASH STREET AC
GOLDSBORO 27530 919 734-6414

GARDELLA, JOHN EUGENE PUD 060
125 BALDWIN AVE. A AC
CHARLOTTE 28204 704 338-6300

GARDNER, FRANCIS SIDNEY, JR. OBG 026
1219 WALTER REED ROAD A AC
FAYETTEVILLE 28314 919 323-2103

GARDNER, JEROME BATCHELOR OBG 092
PO BOX 18568 AC
RALEIGH 27619 919 782-1273

GARDNER, MICHELLE WILSON 074
112 HUNTINGRIDGE RD. A S
GREENVILLE 27834 919 758-3682

GARDNER, VERNON T.A., III 074
112 HUNTINGRIDGE RD. A S
GREENVILLE 27834 919 758-3682

GARDNER, WILLIAM RONALD GS /VS 018
415 N. CENTER ST., STE. 102 A AC
HICKORY 28601 704 327-9178

GARFUNKEL, JOSEPH MORRIS PD 032
229 HUNTINGTON DR. AC
CHAPEL HILL 27514 919 966-5215

GARG, SHYAM LAL IM 065
HAMPSTEAD MEDICAL CTR. A AC
HAMPSTEAD 28443 919 270-2722

GARISON, GARY BROWN CD /IM 026
3629 CAPE CENTER DR. AC
FAYETTEVILLE 28304 919 484-6154

GARLAND, RUSSELL TYSON ORS 000
6824 SHILOH RIDGE LN. A R
CHARLOTTE 28212 704 563-2784

GARMON-BROWN, OPHELIA EUGENIA FP 060
402 E. SUGARCREEK RD. AC
CHARLOTTE 28213 704 535-8245

GARNER, JO FRANCIS, II D 095
204 DOCTOR'S DR. A AC
BOONE 28607 704 264-4553

GARNER, STUART JOSEPH PUD /IM 060
217 TRAVIS AVE. AC
CHARLOTTE 28204 704 372-3350

GARNER, TIMOTHY B. NS 092
3320 WAKE FOREST RD.,STE. 410 A AC
RALEIGH 27609 919 850-9911

GARRABRANT, EDGAR CORNELIUS OTO 092
3010 ANDERSON DR. * AC
PO BOX 18946
RALEIGH 27619 919 787-7171

GARRETT, CHARLES LEROY, JR. PTH /FOP 067
ONSLOW MEMORIAL HOSPITAL A P * AC
JACKSONVILLE 28541 919 353-3498
FAX 919 577-2242

GARRETT, JANET BEER R 011
PO BOX 2959 AC
ASHEVILLE 28802 704 254-4617

GARRETT, JOHN BOSTIAN, JR. U 036
631 COX ROAD A AC
GASTONIA 28054 704 864-7764

GARRETT, JOHN BOSTIAN, SR. FP 034
2926 MAIN ST. L
PO BOX 220
WALKERTOWN 27051 919 595-2751

GARRETT, JOHN WILLIAM IM 011
30 CHOCTAW ST AC
ASHEVILLE 28801 704 254-0881

GARRETT, NORMAN HESSON, JR. IM /END 041
1038 PROFESSIONAL VILLAGE A AC
GREENSBORO 27401 919 378-9131

GARRETT, WILLIAM ELWOOD, JR. ORS 032
BOX 3435, DUMC A AC
DURHAM 27710 919 684-4502
FAX 919 684-8280

GARRISON, HERBERT G., III EM 032
UNC CB #7105, OLD CLINIC BLDG. A * R
CHAPEL HILL 27599 919 758-6245

GARRISON, RALPH BERNARD FP 077
P. O. BOX 1169 A * L/RT
HAMLET 28345 919 582-2140

GARRISON, ROBERT WALTER U 016
15 MEDICAL PARK A AC
MOREHEAD CITY 28557 919 247-2101

GARRISON, SCOTT K. 032
28 HOLLAND DR. A S
CHAPEL HILL 27514

GARRISS, GEORGE WALDON, III 032
RT. #1, BOX 694-A A * S
PITTSBORO 27312 919 933-5520

GARROU, BENJAMIN WESLEY, SR. IM 012
560 MALCOLM BLVD. AC
RUTHERFORD COLLEGE 28671 704 874-0522

GARSIDE, WILLIAM BLAKE PS 092
1112 DRESSER COURT A AC
RALEIGH 27609 919 872-2616
FAX 919 872-2771

GARTMAN, JOHN JOSEPH, JR. NS 032
UNC, 148 BURNETT-WOMACK BLDG. A R
CHAPEL HILL 27599 919 966-1374

GARVEY, ALFRED HAMILTON U 041
200 E. NORTHWOOD ST., STE. 521 A AC
GREENSBORO 27401 919 275-6115

GASKIN, ERNEST REED OPH 060
100 QUEENS RD. AC
CHARLOTTE 28204 704 332-1156

GASKIN, JOHN STOVER, JR. FP 084
210 W. MAIN ST. AC
PO BOX 189
LOCUST 28097 704 888-6156

GASKIN, LEWIS JAMES AN 092
P. O. BOX 18139 A AC
RALEIGH 27619 919 781-7420

GASKIN, LEWIS REED OPH 060
100 QUEENS RD. A P AC
CHARLOTTE 28204 704 332-1156

GASKINS, JAMES A., JR. GS 018
858 SECOND ST., NE, STE 303 AC
HICKORY 28601 704 322-4420

GASKINS, RAYMOND ALBERT, JR. FP /OM 026
405 OWEN DR. AC
FAYETTEVILLE 28304 919 323-3183

GASPARI, MICHAEL M. GE /IM 060
1900 RANDOLPH RD., STE. 310 A AC
CHARLOTTE 28207 704 372-7974
FAX 704 372-4966

GASQUE, BOYD BENNETT, JR. DR 078
P. O. DRAWER 1527 A AC
LUMBERTON 28359 919 738-8222

GASQUE, MAC ROY OM /PH 088
5 FORTUNE COVE RD. A L
BREVARD 28712 704 884-2503

GATES, HERBERT S., JR. OBG 074
DEPT. OF OB-GYN AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-5904
FAX 919 551-5561

GAUDET, TRACY WILLIAMS 032
229-B BRIDGEFIELD PL. S
DURHAM 27705 919 383-3764

GAUL, JOHN S., III ORS /HS 060
2600 E. 7TH ST. A AC
CHARLOTTE 28204 704 372-9820

GAUL, JOHN STUART, JR. ORS /HS 060
2600 E. 7TH ST. A AC
CHARLOTTE 28204 704 372-9820

GAULT, JANICE ANN 032
3805 CHIMNEY RIDGE PL. #103 S
DURHAM 27713 919 383-7712

GAUNT, GEORGE LOREN, JR. OS /CLP 060
2034 RANDOLPH RD. AC
CHARLOTTE 28207 704 372-4600

GAVIGAN, JAMES RICHARD U 074
2 DOCTOR'S PARK A AC
GREENVILLE 27834 919 752-5077
FAX 919 752-9544

GAVIGAN, THOMAS JOSEPH GE 060
1718 E. 4TH ST., STE. 607 AC
CHARLOTTE 28204 704 338-6300

GAY, CHARLES HOUSTON PD 060
3420 SHAMROCK DR. A L/RT
CHARLOTTE 28215 704 333-7479

GAY, ROBERT MILTON PTH /CLP 041
1200 N. ELM STREET A P AC
GREENSBORO 27401 919 379-4074

GAZAK, JOHN MICHAEL U 060
1718 E. 4TH ST., STE. 807 A AC
PRESBYTERIAN MEDICAL TOWER
CHARLOTTE 28204 704 334-3033
FAX 704 358-0418

GEARY, LEON WALLACE PUD /A 032
2609 N. DUKE ST., STE. 504 A P AC
DURHAM 27704 919 471-4466

GEBEL, EMILE LOUIS OPH 023
134 CHAGRIN FARM RD. A RT
SHELBY 28150 704 482-6767

GEDDIE, KENNETH BAXTER PD 040
201 GREENSBORO RD., BOX 198 A L/RT
HIGH POINT 27260 919 882-4171

GEGICK, CHARLES GEORGE END /IM 041
1022 PROFESSIONAL VILLAGE AC
GREENSBORO 27401 919 378-1143

GEHWEILER, JOHN ANDREW, JR. R 044
421 RIDGE RD. AC
WAYNESVILLE 28786 704 452-1517

GEIGER, PATRICIA PD 095
STUDENT HEALTH SERVICE AC
APPALACHIAN STATE UNIV.
BOONE 28608 704 262-3100

GEISSINGER, WILLIAM TUTTLE GS 060
3535 RANDOLPH RD. #201 AC
CHARLOTTE 28211 704 364-8100

GELDMEIER, RICHARD WAYNE R 097
WILKES GENERAL HOSPITAL AC
DEPT. OF RADIOLOGY
N. WILKESBORO 28659 919 651-8400

GELFAND, DAVID WILLIAM R 034
853 BUTTONWOOD DRIVE AC
WINSTON-SALEM 27104 919 748-2481

GELLER, DAVID MICHAEL IM /GER 013
390 COPPERFIELD BLVD. A AC
CONCORD 28025 704 782-5782

GELOT, DEEPAK R. 032
E-20 RIDGEWOOD APTS. A S
404 JONES FERRY RD.
CARRBORO 27510 919 929-3248

GELOT, RAGHUVIR BAXIRAM OTO 008
RT. #1, BOX 6-B AC
AHOSKIE 27910 919 332-5917

GENIEC, PAUL OTO /PS 040
P. O. BOX 5666 AC
HIGH POINT 27262 919 885-0071

GENKINS, STEVEN MARK DR /IM 060
PO BOX 33549 AC
CHARLOTTE 28233 704 384-4056
FAX 704 358-9691

GENTLING, PETER ALLEN GS 011
5-D DOCTOR'S PARK A P AC
ASHEVILLE 28801 704 252-2457

GENTRY, JOHN BILLY PTH 023
307 S. POSTON STREET AC
SHELBY 28150 704 482-0241

GENTRY, RICHARD RYAN R /DR 075
PO BOX 578 AC
COLUMBUS 28722 704 894-3203

GEORGE, LYNN DARCY AN /FP 095
PO BOX 304 A AC
BLOWING ROCK 28605 704 295-3633

GEORGE, PAULA Y. 032
4800 UNIVERSITY DR. #6E R
DURHAM 27707 919 490-5876

GEORGIADE, GREGORY S. PS /GS 032
BOX 3960, DUMC A AC
DURHAM 27710 919 684-3039

GEORGIADE, NICHOLAS GEORGE PS 032
BOX 3098, DUMC A L
DURHAM 27710 919 684-2854

GERATZ, JOACHIM DIETER PTH 032
UNC, DEPT. OF PTH CB #7525 A AC
CHAPEL HILL 27599 919 966-4294

GERBE, RONALD WILLIAM OTO /HNS 032
109 CONNER DR., STE. 207 A P AC
CHAPEL HILL 27514 919 967-5599

GERDES, JOSEPH JOHN DR 013
2701 LANDING VIEW LN. A AC
CHARLOTTE 28226 704 786-0214

GERHARDT, EDWARD BURTON GS /TS 041
1317 N. ELM ST. STE. 1 A AC
GREENSBORO 27401 919 373-8245
FAX 919 373-8949

GERKE, CALVIN GLENN, JR. 032
3805-207 CHIMNEY RIDGE PL. A S
DURHAM 27713 919 419-0330

GEROCK, HENRY FP 067
200 DOCTOR'S DRIVE, SUITE M AC
JACKSONVILLE 28540 919 353-7600

GERRARD, EDWARD ROLLAND U 018
1202 N. CENTER STREET AC
HICKORY 28601 704 322-4340

GERTSCH, RALPH C. AN 092
2800 BLUE RIDGE RD.,STE. 204 A C
RALEIGH 27619 919 781-7420

GESZLER, GERIANNE OBG 026
2404 ROLLING HILL RD. A AC
FAYETTEVILLE 28304 919 323-8724

GETTES, ANN CALDWELL IM 032
604 LAKESHORE LANE AC
CHAPEL HILL 27514 919 942-5708

GETTINGER, GLEN SCOTT AN /IM 011
211 RIVA RIDGE DR. A AC
FAIRVIEW 28730 704 254-1969

GETZ, DONALD DAVID ORS 065
1616 MEDICAL CENTER DRIVE AC
WILMINGTON 28401 919 762-2655

GEYER, ANNE HUGGINS 034
1232 FORSYTH ST. S
WINSTON-SALEM 27101 919 723-3898

GHOSTINE, SALIM Y. NS 026
1665 OWEN DR. AC
FAYETTEVILLE 28304 919 484-1447

GIANNETTO, LISA ANN IM 032
423 CAROLINA CIR. AC
DURHAM 27707 919 684-8111

GIANTURCO, DANIEL THOMAS P 032
2925 FRIENDSHIP ROAD AC
DURHAM 27705 919 684-4335

GIBBS, JAMES S. GE /IM 034
1830 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 765-0463

GIBBS, STUART WYNN R 036
2647 ARMSTRONG CIR. A L/RT
GASTONIA 28054 704 865-5883

GIBLIN, THOMAS RICHARD PS 060
421 N. WENDOVER RD. A * AC
CHARLOTTE 28211 704 365-8255

GIBSON, JACKSON V. IM 063
205 PAGE RD. AC
PINEHURST 28374 919 295-5511

GIBSON, JAMES FRANKLIN GS /ADM 053
1916 WILKINS DRIVE A AC
SANFORD 27330 919 776-5191

GIBSON, JOHN MCNEILL IM 060
212 S. TRYON ST., STE. 1500 A AC
CHARLOTTE 28202 704 333-6544
FAX 704 333-8478

GIBSON, LEONARD HOWARD, JR. 074
RT. #8, BOX 329-6 A S
GREENVILLE 27834 919 830-4875

GIBSON, ROBERT WYLIE P /N 034
190 CHARLOIS BOULEVARD A AC
WINSTON-SALEM 27103 919 768-6930

GIBSON, SUSAN H. 034
4755 COUNTRY CLUB RD. #121-I A S
WINSTON-SALEM 27104 919 760-4416

GILBERT, CHARLES FRANKLIN PTH 074
640 MEDICAL DR., STE. D A AC
GREENVILLE 27834 919 551-4495

GILBERT, DAVID BRANSON CD /IM 026
1756 METROMEDICAL DRIVE A AC
FAYETTEVILLE 28304 919 323-1322

GILBERT, GEORGE GAYLORD U 041
1517 DOUBLE OAKS RD. A * L/RT
GREENSBORO 27410 919 282-0168

GILBERT, MICHAEL T. OPH 070
1134 N. ROAD STREET A AC
ELIZABETH CITY 27909 919 338-0148

GILBERT, PAUL PRESSLY ORS 060
2300-B RANDOLPH ROAD AC
CHARLOTTE 28207 704 375-5955

GILBERT, RICHARD LESLIE, JR. 001
3128 COMMERCE PL. AC
BURLINGTON 27215 919 758-1862

GILBERT, STANLEY KEITH, JR. ORS /HS 026
1300 MEDICAL DRIVE A AC
FAYETTEVILLE 28304 919 484-2171

GILES, JOHN HENRY GS 012
350 E. PARKER ROAD * AC
MORGANTON 28655 704 437-7388

GILGOR, ROBERT SAMUEL D 032
891 WILLOW DRIVE A AC
CHAPEL HILL 27514 919 942-3106

GILL, KENNETH ARNOLD, JR. D /DMP 040
624 QUAKER LN,STE,302,BLDG B A * AC
HIGH POINT 27262 919 887-3195

GILL, LOWELL HARLEY ORS 060
1001 BLYTHE BLVD. #200 A AC
CHARLOTTE 28203 704 373-0544

GILLEN, HOWARD WILLIAM N 065
1301 CYPRESS GROVE DR. * AC
WILMINGTON 28401 919 762-8501

GILLESPIE, WILLIAM ALLEN PD 092
3120 HIGHWOODS BLVD. AC
RALEIGH 27609 919 878-5800

GILLIAM, CHARLES FRANKLIN PD 029
200 ARTHUR DRIVE A AC
THOMASVILLE 27360 919 475-2348

GILLIAM, JOHN HUGH, III GE /IM 034
300 S. HAWTHORNE ROAD AC
BOWMAN GRAY SCH. OF MED
WINSTON-SALEM 27103 919 748-4601
FAX 919 748-6376

GILLIATT, CECIL LEE, JR., PD 023
101 GROVER STREET A AC
SHELBY 28150 704 482-1435

GILLIGAN, KENDALL ALLEN EM 044
109 ROBIN LANE AC
WAYNESVILLE 28786 704 456-7894

GILLILAND, M.G.F. FOP /PTH 074
ECU SCHOOL OF MEDICINE A AC
DEPT. OF CLI. PTH, BRODY 1S08
GREENVILLE 27858 919 551-4655
FAX 919 551-3320

GILMER, PETER WINSTON ORS 032
2609 N. DUKE ST. A P AC
DURHAM 27704 919 220-5255

GILMORE, BROOKS WEBSTER IM 041
342 N. ELM STREET A P AC
GREENSBORO 27401 919 274-6373

GILMORE, SAMUEL JOSEPH OBG 054
KINSTON CLINIC, NORTH, STE. E A AC
KINSTON 28501 919 522-4333

GILMOUR, MONROE TAYLOR IM /CD 060
1300 BAXTER ST., STE. 163 A L/RT
CHARLOTTE 28204 704 375-0287

GILPIN, JOHN W. DR 034
925 CLEVELAND ST. #222 R
GREENVILLE, SC 29601 803 295-4410

GIMESH, JOHN SIGMUND PD 026
3415-C MELROSE ROAD AC
FAYETTEVILLE 28304 919 484-8163

GINN, THOMAS MOSS IM 080
319 MOCKSVILLE AVE. AC
SALISBURY 28144 704 637-3538

GINN, WILLIAM M. , JR. CD /IM 092
2800 BLUE RIDGE, STE. 205 AC
RALEIGH 27607 919 782-0414

GINTHNER, TERRY P. R 082
PO BOX 739 AC
CLINTON 28328 919 592-8070

GIOANNINI-BROWN, CAROL ANN PTH 032
5009 N. GLEN DRIVE A AC
RALEIGH 27609 919 470-4000

GIOFFRE, RONALD ANTHONY ORS 041
PO BOX 14580 A AC
315 W. WENDOVER AVE.
GREENSBORO 27415 919 275-0724
FAX 919 272-5178

GIRAGOS, JOHN G. P /PYA 032
20 W. COLONY PL., STE. 260 A AC
DURHAM 27705 919 493-1810

GISH, LARRY MORGAN IM 080
611 MOCKSVILLE AVENUE A AC
SALISBURY 28144 704 633-7220

GITELMAN, HILLEL JONATHAN NEP /IM 032
UNC DEPT. OF MED. CB 7155 AC
CHAPEL HILL 27599 919 966-2561

GITT, KENNETH DARYL OBG 086
PO BOX 1408 AC
MOUNT AIRY 27030 919 786-4522

GIVENS, DAVIDSON HOWARD CD /IM 034
1399 WESTGATE CENTER DR. AC
WINSTON-SALEM 27103 919 768-4261

GLANCE, GREGORY LYNN IM 011
416 DOCTOR'S BLDG. A AC
ASHEVILLE 28801 704 253-0443

GLASGOW, DOUGLAS MCKAY IM /GER 060
400 AVINGER LN. #403 A L/RT
DAVIDSON 28036 704 896-1403

GLASS, LARRY THOMAS PD 060
7108 PINEVILLE-MATTHEWS RD. AC
NALLE CLINIC
CHARLOTTE 28226 704 542-1952

GLASS, PETER STANLEY A. AN 032
BOX 3094, DUMC A AC
DURHAM 27710 919 684-5045

GLASSMAN, STUART LEWIS GS /VS 045
835 FLEMING ST. AC
HENDERSONVILLE 28739 704 692-1191

GLASSON, JOHN ORS 032
615 SWIFT AVE. A P * L
DURHAM 27701 919 489-5110

GLEATON, HUGH ELBERT, JR. OPH 045
643 FIFTH AVENUE, WEST A AC
HENDERSONVILLE 28739 704 692-9146

GLEN, DULANEY IM 034
250 CHARLOIS BOULEVARD AC
WINSTON-SALEM 27103 919 768-4730

GLENN, CHANNING GP 009
P. O. BOX 278 A L/RT
ELIZABETHTOWN 28337 919 862-3721

GLENN, DAVID LOCKE, JR. GS 045
561 FLEMING ST. AC
HENDERSONVILLE 28739 704 693-1778

GLENN, DOROTHY NORMAN OBG 036
6005 MIDNIGHT PASS RD. A L
SARASOTA, FL 34242

GLENN, JOHN CAPERS, JR. R /NM 062
514 WOOD STREET A L
TROY 27371 919 572-3475

GLINSKI, RONALD PETER U /PTH 024
720 JEFFERSON ST. A AC
WHITEVILLE 28472 919 642-5832

GLOD, ALBERT PAUL GS /TS 034
152 MUIRFIELD DR. A L/RT
WINSTON-SALEM 27104 919 725-3702

GLOVER, JAMES BUNYAN OBG 098
CAROLINA CLINIC AC
WILSON 27893 919 291-9010

GLOVER, JOHN SNOW OBG 060
1718 E. FOURTH ST., #307 AC
CHARLOTTE 28204 704 332-8103

GLOVER, MICHAEL GRIFFIN ORS 098
1700 S. TARBORO ST A AC
WILSON 27893 919 399-2281

GLOWER, DONALD D., JR. TS 032
BOX 31064, DUMC A AC
DURHAM 27710 919 681-5789

GLUGOVER, DONALD BENJAMIN ORS 012
PO BOX 700 AC
DOCTORS CLINIC
VALDESE 28690 704 874-3379

GOBEL, WILLIAM KENNETH FP 076
P. O. BOX 1886 AC
ASHEBORO 27203 919 672-0090

GOBIEN, ROLF PETER R 082
PO BOX 739 AC
409-C COOPER DR.
CLINTON 28328 919 592-8070

GOCKERMAN, JON PAUL ON /HEM 032
DUKE COMP. CARE CTR. AC
P. O. BOX 3877
DURHAM 27710 919 684-6283
FAX 919 684-8884

GOCO, ISAIAS ISMAEL GS /CDS 034
1901 S.HAWTHORNE RD.,STE.220 A AC
WINSTON-SALEM 27103 919 768-4710
FAX 919 768-2340

GODBOLD, RONALD LEE D 011
281 MCDOWELL STREET A AC
ASHEVILLE 28803 704 252-5679

GODEHN, DONALD JOHN, JR., D 045
506 PARK HILL CT., STE. #1 A AC
HENDERSONVILLE 28739 704 693-0275

GODLEY, PAUL A. ON /IM 032
299 SUMMERWALK CIR. R
CHAPEL HILL 27514 919 966-4431

GODSEY, RALEIGH KIRBY, JR. OBG 060
2711 RANDOLPH RD., STE. 305 AC
CHARLOTTE 28207 704 372-8020

GODWIN, GWENDOLYN R. 074
PO BOX 700 S
WINTERVILLE 28590 919 756-0823

GODWIN, HAROLD LACY ADM 026
1601-B OWEN DRIVE A AC
FAYETTEVILLE 28304 919 323-1152
FAX 919 323-4007

GODWIN, HERMAN ALLEN, JR. HEM /IM 060
1001 BLYTHE BLVD., STE. 500 AC
CHARLOTTE 28203 704 355-5100
FAX 704 355-5180

GODWIN, WINSTON YUVAWN, JR. GS 060
2300 RANDOLPH RD. * AC
CHARLOTTE 28207 704 376-0327

GOEL, ATUL KUMAR FP 092
2620 NEW BERN AVE C
RALEIGH 27610 919 231-2800

GOETZL, UGO N /P 032
PO BOX 15249 * AC
3901 ROXBORO RD.
DURHAM 27704 919 479-4100

GOFF, DAVID ALBERT IM /PD 092
2801 BLUE RIDGE RD., STE. G-10 AC
RALEIGH 27607 919 783-0707

GOFORTH, JOHN PARKER IM 054
109 AIRPORT RD. A AC
KINSTON 28501 919 522-3661

GOLBY, MARY BLUE IM 032
2511 N. DUKE ST. A L/RT
DURHAM 27704 919 477-5350

GOLD, BENJAMIN MILLER OBG 064
1730 LAFAYETTE CIRCLE A L/RT
ROCKY MOUNT 27801 919 442-4756

GOLDBERG, DAVID S. IM /OM 036
1361-E E. GARRISON BLVD. AC
GASTONIA 28054 704 864-2630

GOLDBERG, JOEL STEVEN AN 032
RT. #1, BOX 2602 AC
HILLSBOROUGH 27278 919 286-6938

GOLDBERG, TREVOR IAN OTO 060
1600 E. THIRD STREET A AC
CHARLOTTE 28204 704 372-3300
FAX 704 358-4157

GOLDMAN, ALAN LAWRENCE PD 092
2800 BLUE RIDGE BLVD.,STE. 501 AC
RALEIGH 27607 919 781-7490

GOLDMAN, JAMES OSWALD, JR. EM /ADM 032
PO BOX 1799 A AC
WAKE FOREST 27588 919 556-5665

GOLDNER, JOSEPH LEONARD ORS /HS 032
BOX 3706, DUMC L
DURHAM 27710 919 684-2628

GOLDNER, RICHARD DOUGLAS ORS /HS 032
BOX 3480, DUMC A AC
DURHAM 27710 919 684-6461

GOLDSTEIN, BETH GOODRICH D 092
101 S. W. CARY PARKWAY A C
SUITE 210
CARY 27511 919 467-8556

GOLDSTEIN, JEFFREY BRIAN 032
3611 UNIVERSITY DR. APT. 11-0 A S
DURHAM 27707 919 419-0003

GOLDSTON, WILLIAM ROBERT OBG 092
4420 LAKE BOONE TR., STE. 303 AC
RALEIGH 27607 919 781-5510

GOLEY, ALEXANDER FAIRLEY IM 001
1509 VAUGHN ROAD AC
BURLINGTON 27215 919 228-6000

GOLLBERG, HAROLD RONALD P /GER 011
445 BILTMORE CENTER, STE. 304 A * AC
ASHEVILLE 28801 704 252-1421

GOMEZ, RAUL FERNANDO P 026
3415 MELROSE RD. #A AC
FAYETTEVILLE 28304 919 484-9634

GONZALEZ-CUNI, LUIS G. AN 079
618 S. MAIN ST. AC
REIDSVILLE 27320 919 349-8461

GONZALEZ, JORGE JOSE IM /END 065
2131 S. 17TH STREET AC
WILMINGTON 28401 919 343-0161

GOODCHILD, NIGEL THOMAS TR 041
1200 N. ELM ST. A AC
GREENSBORO 27401 919 379-4143

GOODE, DAVID JOHN P 034
BOWMAN GRAY, DEPT. OF PSY. A AC
WINSTON-SALEM 27103 919 748-4142

GOODE, THOMAS VANCE, III GS 049
326 SUMMIT AVE. L/RT
STATESVILLE 28677 704 873-7253

GOODEN, MICHAEL DEAN OBG 096
102 HANDLEY PARK CT. A AC
GOLDSBORO 27534 919 734-3344
FAX 919 735-3025

GOODFIELD, PETER CD 045
510 7TH AVENUE, WEST A AC
HENDERSONVILLE 28739 704 692-2231

GOODHALL-GUNN, PATRICIA AN 025
PO BOX 983 AC
NEW BERN 28563 919 633-6117

GOODIN, THOMAS ELLIOTT,III AN 018
701 5TH AVE., NE AC
CONOVER 28613 704 322-0870

GOODING, STEPHEN C. OBG 026
1641 OWEN DR. A AC
FAYETTEVILLE 28304 919 484-6474

GOODMAN, BENJAMIN WARREN FP 018
24 SECOND AVENUE, N. E. A P * L
HICKORY 28601 704 328-2231

GOODMAN, DONALD BRUCE, JR. FP 060
6708 ALBEMARLE RD. AC
CHARLOTTE 28212 704 536-4903

GOODMAN, FLOYD KEITH OBG 074
BLDG. #5, DOCTOR'S PARK AC
GREENVILLE 27834 919 758-5246

GOODSON, BRUCE MICHAEL FP 086
213 JACKSON ST., BOX 1729 AC
YADKINVILLE 27055 919 679-7570

GOODSON, JOHN PHILLIP GS 092
PO BOX 32090 AC
3814 BROWNING PL.
RALEIGH 27622 919 781-0710

GOODSON, PHILLIP RICHARD OBG 049
702 HARTNESS RD. AC
STATESVILLE 28677 704 873-7250

GOODWIN, BONNIE JEANNE IM /ON 025
PO BOX 68 AC
POLLOCKSVILLE 28573 919 633-1010

GOODWIN, JAMES OSCAR OBG 091
MEDICAL ARTS BUILDING A AC
RUIN CREEK ROAD
HENDERSON 27536 919 492-8576

GOODWIN, JOEL SEXTON OBG 080
412 RICHMOND ROAD AC
SALISBURY 28144 704 636-9270

GOOLSBY, ROBERT PATTEN 032
28 HOLLAND DR. S
CHAPEL HILL 27514 919 942-2334

GORBANDT, MONICA BALKUS 034
410-P PARK RIDGE LN. A S
WINSTON-SALEM 27104 919 768-6796

GORDON, CATHERINE MASON 032
201 HOWELL ST., APT. 5-D S
CHAPEL HILL 27514 919 968-1842

GORDON, CHRISTOPHER JAY 034
300 S. HAWTHORNE RD. A S
MEDICAL STUDENT BOX 2498
WINSTON-SALEM 27103 919 777-0940

GORDON, JOSEPH GROVER R 034
1801 HATTIE CIRCLE A L/RT
WINSTON-SALEM 27105 919 748-4316

GORDON, MICHAEL ALAN GS /VS 053
114 SOUTH GULF ST. A AC
SANFORD 27330 919 775-7146

GORE, RONALD GENE AN 092
PO BOX 18139 A AC
RALEIGH ANESTHESIA ASSOC. INC.
RALEIGH 27619 919 781-7420

GOSLEN, JUNIUS BLAKE, III D 060
1718 E. 4TH ST., STE 304 AC
CHARLOTTE 28204 704 375-6766

GOSS, FREDERICK UHL IM 080
611 MOCKSVILLE AVE. AC
SALISBURY 28144 704 633-7220

GOSSETT, ROBERT PETER U 023
1001 N. WASHINGTON ST. A AC
SHELBY 28150 704 482-2011

GOTTLIEB, LOUIS NATHAN OPH 034
631 COLISEUM DRIVE AC
WINSTON-SALEM 27106 919 723-1041

GOTTOVI, DANIEL PUD /IM 065
1202 MEDICAL CENTER DRIVE A P * AC
WILMINGTON 28401 919 341-3300
FAX 919 341-3419

GOTTSCHALK, BERNARD J. HEM /ON 065
1202 MEDICAL CENTER DR. AC
WILMINGTON 28401 919 762-2990

GOTTSCHALK, CARL WILLIAM IM /NEP 032
N. C. MEMORIAL HOSPITAL AC
CHAPEL HILL 27599 919 966-4567

GOTTSEGEN, DANIEL LEO OBG 041
721 GREEN VALLEY RD., STE. 300 A AC
GREENSBORO 27408 919 275-5391

GOUBRAN, MICHEL OBG /END 032
4007 N. ROXBORO ST. AC
DURHAM 27704 919 471-4411

GOUDARZI-LANGROUDI, M. KAMRAN GS /GP 031
219 E. MAIN ST. AC
WALLACE 28466 919 285-7942

GOUDARZI, HORMOZE ABBAS GS 065
1607 DOCTOR'S CIRCLE AC
WILMINGTON 28401 919 763-6571

GOUGH, WILLIAM, III RHU /IM 011
445 BILTMORE CENTER, STE. 306 AC
ASHEVILLE 28801 704 258-9533

GRADY, RICHARD DWIGHT OTO /HNS 025
P. O. BOX 2406 A AC
709 PROFESSIONAL DR.
NEW BERN 28560 919 638-2666

GRAEUB, CHARLES M., JR. EM 040
2125 LAURA LANE A AC
HIGH POINT 27262 919 454-4801

GRAHAM, CARLA C. 074
1012-A WESTOVER DR. S
GREENVILLE 27834 919 752-2972

GRAHAM, CHARLES PATTISON GS 065
201 FOREST HILLS DRIVE A L/RT
WILMINGTON 28403 919 762-0385

GRAHAM, COLE BLEASE, III 032
214 CONNER DR. APT. #6 S
CHAPEL HILL 27514 919 929-3816

GRAHAM, DAVID ERIC GP /AM 060
P. O. BOX 459 AC
201 SADIE DR.
MATTHEWS 28105 704 847-8664

GRAHAM, DOUGLAS K. 032
624 HIBBARD DR. #C A S
CHAPEL HILL 27514

GRAHAM, DOYLE GENE PTH /NA 032
BOX 3005, DUMC A P * AC
DURHAM 27710 919 684-2498
FAX 919 684-2593

GRAHAM, FREDERICK WILLIAM, JR. FP 076
375 SUNSET AVE. AC
ASHEBORO 27203 919 625-4215

GRAHAM, GLORIA FLIPPIN D 098
702 BROAD STREET A AC
WILSON 27893 919 291-5600
FAX 919 291-6935

GRAHAM, JOHN BORDEN PTH /HEM 032
UNC SCHOOL OF MEDICINE L/RT
CHAPEL HILL 27599 919 966-4318

GRAHAM, JOHN CALHOUN, JR. DR /NM 070
106 S. WATER ST. AC
PO BOX 250
ELIZABETH CITY 27909 919 335-2652

GRAHAM, WALTER RALEIGH OPH 060
743 HEMPSTEAD PLACE A L/RT
CHARLOTTE 28207 704 334-6014

GRAHAM, WILLIAM ALEXANDER OBG 032
2247 CRANFORD ROAD A L/RT
DURHAM 27706 919 489-5214

GRAINGER, WADE KENTON FP /GER 011
2161 HENDERSONVILLE RD. APT. C AC
ARDEN 28704 704 684-2008

GRANADOS, JUAN L. OBG /MFM 092
3000 NEW BERN AVE. AC
RALEIGH 27610 919 250-8184

GRANGER, RONALD EUGENE OBG 032
209 E. CARVER ST. A AC
DURHAM 27704 919 471-2273

GRANT, GEORGE REDD, JR. IM 092
3101 ESSEX CIRCLE AC
RALEIGH 27608 919 782-2631

GRANT, GREGORY OBG 011
2561 HENDERSONVILLE RD. AC
PO BOX 549
ARDEN 28074 704 687-1435

GRANT, HUGH JUDD, JR. OBG 092
4420 LAKE BOONE TR., STE. 302 AC
RALEIGH 27607 919 571-1040

GRANT, JOHN PALMER GS /NTR 032
BOX 3105, DUMC A * AC
DURHAM 27710 919 684-3314

GRANT, JOSEPH DURHAM ORS 096
2701 MEDICAL OFFICE PLACE AC
GOLDSBORO 27530 919 736-2157

GRANT, TERRY ALAN 074
2905-A CEDAR CREEK RD. R
GREENVILLE 27834 919 551-4757

GRANT, WILLIS JACKSON, III P 034
250 CHARLOIS BLVD. AC
WINSTON-SALEM 27103 919 768-4730

GRAPER, ROBERT GORDON PS /GS 041
200 E. NORTHWOOD ST. #400 A AC
GREENSBORO 27401 919 275-0919
FAX 919 275-4849

GRAVATT, BENJAMIN THOMAS AN 011
202 DOCTOR'S BUILDING A AC
ASHEVILLE 28801 704 254-1969

GRAVELLE-CAMELO, SHERYL 074
2409 E. THIRD ST. A S
GREENVILLE 27858 919 830-3751

GRAVLEE, GLENN PAGE AN 034
1205 CLOVER ST. A AC
WINSTON-SALEM 27101 919 748-4498

GRAY, CRAIGAN LUTHER GYN 011
143 ASHELAND AVENUE A AC
ASHEVILLE 28801 704 258-9191

GRAY, CYRUS LEIGHTON R 040
2901-B ISABEL ST. A L
TAMPA, FL 33607

GRAY, MARY JANE OBG /GYN 000
1622 NW RIBIER PL. RT
CORVALLIS, OR 97330

GRAY, PATRICK HAMPTON OBG 041
510 N. ELAM AVE., STE. 101 A AC
GREENSBORO 27403 919 854-8800

GRAY, ROBERTA SKINNER PNP 074
DEPT. OF PEDIATRICS A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4963

GRAY, THOMAS GLEN IM 092
2620 NEW BERN AVE. AC
RALEIGH 27610 919 250-2654

GRAY, TIMOTHY KENNEY END /IM 032
UNC, DEPT. OF MEDICINE AC
CB 7170, MACNIDER BLDG.
CHAPEL HILL 27599 919 966-3336

GRAYBEAL, FRANK R., JR. DR 014
PO BOX 659 A AC
LENOIR 28645 704 754-2283

GREAVES, PAULA CECILIA 074
103 SHILOH DR. #3 S
GREENVILLE 27834 919 756-9819

GRECO, PETER PAUL D 025
1914 NEUSE BLVD. AC
NEW BERN 28561 919 633-1817

GREELISH, JAMES P. 034
318 CORONA ST. #A S
WINSTON-SALEM 27103 919 761-1310

GREEN, ARTHUR GERRISH, III IM /GER 041
1511 WESTOVER TERRACE AC
GREENSBORO 27408 919 373-1184
FAX 919 373-1589

GREEN, EDWIN JAY IM 041
1317 N. ELM ST. STE. #2 AC
GREENSBORO 27401 919 373-1676

GREEN, FRANCIS WEATHERLY IM 084
1009 N. 6TH ST. A P AC
ALBEMARLE 28001 704 982-8169

GREEN, HAROLD D. CD 034
3619 DEWSBURY ROAD A L/RT
WINSTON-SALEM 27104 919 765-5078

GREEN, JAMES PRESTON FP 091
176 BECKFORD DRIVE AC
HENDERSON 27536 919 492-2161

GREEN, PAUL, JR. GYN 080
315 G MOCKSVILLE AVE. A P AC
SALISBURY 28144 704 638-0023

GREEN, RAY LYMAN OBG 049
1216 DAVIE AVE. AC
STATESVILLE 28677 704 873-1436

GREEN, ROBERT LEE, JR. P /N 032
4100 CHAPEL HILL RD. AC
#1 INNISFREE
DURHAM 27707 919 489-8547

GREEN, ROBERT LORENZA R 034
3155 MAPLEWOOD AVENUE A AC
WINSTON-SALEM 27103 919 760-8381

GREEN, STEPHEN CLARK OBG 074
ECU SCHOOL OF MEDICINE AC
DEPT. OF OB-GYN
GREENVILLE 27858 919 551-5903

GREEN, WILLIAM ROBERT AN 060
1901 RANDOLPH RD. A AC
CHARLOTTE 28207 704 375-6792

GREENBERG, WILLIAM ROGER AN 090
P. O. BOX 2188 A P AC
MONROE 28110 704 289-3247

GREENE, DENNIS ALAN OTO /HNS 092
3100 DURALEIGH RD. AC
RALEIGH 27612 919 831-5669
FAX 919 881-5630

GREENE, ELEANOR E.W. OBG 040
700 N. ELM ST. A AC
HIGH POINT 27262 919 841-6574

GREENE, JOSEPH ELMO GP /OM 090
303 OLD HIGHWAY 74 A L
MARSHVILLE 28103 704 624-6688

GREENE, PHILLIP GP 090
613 E. ROOSEVELT BLVD. AC
MONROE 28110 704 283-8193

GREENE, RALPH LEON, JR. IM 060
3535 RANDOLPH ROAD A AC
CHARLOTTE 28211 704 365-0760
FAX 704 364-1641

GREENE, ROBERT HADLEY FP 060
2001 OAKLAWN AVENUE A
DECEASED--11-23-90
CHARLOTTE 28216 704 332-7506

GREENE, WALTER BLAIR ORS /PDS 032
UNC, 237 BURNETT-WOMACK A * AC
CHAPEL HILL 27599 919 966-3691
FAX 919 966-6730

GREENFIELD, JOS. C., JR. IM /CD 032
BOX 3246, DUMC AC
DURHAM 27710 919 681-6147

GREENHOOT, JERRY HARVEY NS 060
1010 EDGEHILL ROAD NORTH A P AC
CHARLOTTE 28207 704 376-1605

GREENMAN, MAXWELL OPH 060
309 S. LAUREL AVENUE A AC
CHARLOTTE 28207 704 372-4380

GREENWOOD, JAMES BROOKS, JR. FP 060
2319 PROVIDENCE RD. A L/RT
CHARLOTTE 28211 704 366-4260

GREENWOOD, ROBERT SAMUEL CHN /PD 032
UNC, 751 CLINICAL SCI. 229-H A AC
CHAPEL HILL 27599 919 966-2528

GREER, THOMAS BYWATER OBG 092
P. O. BOX 18568 A AC
RALEIGH 27619 919 782-1273

GREGANTI, MAC ANDREW IM /GER 032
UNC, DEPT. OF IM AC
CHAPEL HILL 27599 919 966-2276
FAX 919 966-6630

GREGG, CHARLES ELI AN 034
108 BALLY HO DR. AC
LEWISVILLE 27023 919 748-4791

GREGORY, HUGH STANLEY OTO 067
411 WESTERN BLVD., STE. A A AC
JACKSONVILLE 28540 919 455-4847

GREGORY, JERRY GLEN P 074
DEPT. OF PSYCHIATRY A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2660

GREIG, JOHN HAMILTON AN 060
4023 ARBOR WAY AC
CHARLOTTE 28211 704 366-9408

GREIG, PHILLIP C. 034
2747 WESTMORE CT. R
WINSTON-SALEM 27103 919 765-2279

GREMILLION, DAVID HENRY IM /ID 092
3000 NEW BERN AVE. AC
RALEIGH 27610 919 755-8520

GRENKOSKI, MARK EDWIN 000
491 BILTMORE AVE. R
ASHEVILLE 28801 704 258-0635

GRESALFI, THOMAS J., JR. P 041
606 WALTER REED DR. AC
GREENSBORO 27403 919 299-0108

GREVEN, CRAIG MICHAEL OPH 034
4234 ALLISTAR RD. AC
WINSTON-SALEM 27104 919 748-4091
FAX 919 748-4207

GREVEN, KATHRYN MCCONNELL RO 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4981

GREWAL, SATPAL KAUR TR 025
CRAVEN REGIONAL MEDICAL CTR. AC
PO BOX 5117
NEW BERN 28560 919 633-8730

GRICE, KATHRYN A. 034
3932 HAMPTON RD. A R
CLEMMONS 27012 919 748-4498

GRICE, ORMOND DREW GS 025
701 NEWMAN RD. * AC
NEW BERN 28562 919 633-2081

GRICE, STEPHEN C. AN 034
3932 HAMPTON RD. A AC
CLEMMONS 27012 919 766-0911

GRIER, JOHN CALVIN, JR. P 063
P. O. BOX 819 A * L
PINEHURST 28374 919 295-6166

GRIER, MICHAEL WILLIAM GE /IM 011
30 CHOCTAW STREET AC
ASHEVILLE 28801 704 254-0881

GRIER, RAYMOND EDWARD AN /PH 041
403 WILLOUGHBY BLVD. AC
GREENSBORO 27408 919 275-9741

GRIFFETH, JACK THURMAN RO 036
421-D S. SHARON AMITY RD. A AC
CHARLOTTE 28211 704 866-2938
FAX 704 866-2125

GRIFFIN, ADRIAN MARK EM /P 086
PO BOX 1623 A P AC
913 WORTH ST.
MOUNT AIRY 27030 919 786-2001

GRIFFIN, ANDREW S. U 034
5116 CARVERSHAM CT. A AC
WINSTON-SALEM 27106 919 765-4021
FAX 919 768-7782

GRIFFIN, ASHTON THOMAS, III FP 096
2400 WAYNE MEMORIAL DRIVE A AC
GOLDSBORO 27530 919 735-8601

GRIFFIN, EZRA DANIEL, JR. OBG 060
449 N. WENDOVER ROAD AC
CHARLOTTE 28211 704 364-3760

GRIFFIN, JOSEPH LAIRD OBG 014
P. O. BOX 2640 AC
LENOIR 28645 704 758-2300

GRIFFIN, MARION WILSON GS /TS 076
218-D FOUST ST. A AC
ASHEBORO 27203 919 625-6188

GRIFFIN, RICHARD MADISON OPH 018
27 13TH AVENUE, N.E. A AC
HICKORY 28601 704 322-6040

GRIFFIN, ROBERT ASHLEY P /N 011
APPALACHIAN HALL, BOX 5534 L/RT
ASHEVILLE 28813 704 253-3681

GRIFFIN, STEPHANIE D. 074
112 TEAKWOOD DR. A R
GREENVILLE 27834 919 537-4611

GRIFFIN, THOMAS LAFAYETTE U 098
1141 WOODLAND DR. A RT
WILSON 27893 919 299-2200

GRIFFIN, WILLIAM LEWIS ORS 060
120 PROVIDENCE RD. A AC
CHARLOTTE 28207 704 377-0351

GRIFFIN, WILLIAM RAY, JR. P /N 011
30 HILLTOP ROAD A L/RT
ASHEVILLE 28803 704 253-3681

GRIFFIN, WILLIAM RUSSELL, JR. ORS 060
3535 RANDOLPH ROAD, STE. 103 A AC
CHARLOTTE 28211 704 365-2111

GRIFFITH, MARY IRENE GYN 034
515 S. HAWTHORNE RD. A L/RT
WINSTON-SALEM 27103 919 722-2255

GRIFFITHS, MARIAN FOLSOM N 001
316 N. GRAHAM-HOPEDALE RD. A AC
BURLINGTON 27217 919 227-3621

GRIGG, CLAUD MCNEILL IM /CD 060
217 TRAVIS AVENUE AC
CHARLOTTE 28204 704 372-3350

GRIGGS, BOYCE POWELL FP 055
325 PINE ST. WEST L/RT
LINCOLNTON 28092 704 735-2352

GRIGGS, THOMAS RUSSELL CD /IM 032
UNC SCHOOL OF MED. CB 7075 AC
DEPT. OF MED. & PATHOLOGY
CHAPEL HILL 27599 919 966-5207

GRIGSBY, HARDIN BLAND GYN 049
502 E. CENTER AVE. AC
MOORESVILLE 28115 704 328-8146

GRIM, KENNETH BOYD PTH /CLP 032
124 FIRST ST. NW A L/RT
LONG BEACH 28461 919 278-9424

GRIMES, JOHN HARLIN U 032
2609 N. DUKE ST., STE. 302 A AC
DURHAM 27704 919 471-8423

GRIMM, RUBY ANN ON /HEM 049
738 BRYANT ST. A P AC
STATESVILLE 28677 704 873-2219

GRIMMETT, MATTHEW HILL R /PD 010
829 SHORELINE DRIVE, WEST A L/RT
SUNSET BEACH 28459 919 579-2091

GRIMSON, BAIRD SANFORD OPH 032
UNC CB #7040 AC
733 BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-5296

GRINE, WILLIAM BARK U 098
1704 TARBORO STREET A AC
WILSON 27893 919 291-7001

GRISHAM, JOE WHEELER PTH /GE 032
UNC, DEPT.OF PTH-CB #7525 A AC
CHAPEL HILL 27599 919 966-4678

GRISTINA, ANTHONY GEORGE ORS 034
2190 FOX MILL RD. AC
HERNDON, VA 22071

GRIVAS, NICHOLAS ELLSWORTH NS 060
1928 RANDOLPH RD. STE. 100 A AC
CHARLOTTE 28207 704 377-9312

GROAT, RICHARD ARNOLD PTH 041
702 W. CORNWALLIS DR. A L
GREENSBORO 27408 919 274-7568

GROAT, ROBERT LANIER OPH 041
1317 N. ELM ST., STE. #4 AC
GREENSBORO 27401 919 378-1442

GROBEN, PAMELA ANNE PTH 001
327 GRAHAM-HOPEDALE RD. AC
BURLINGTON 27217 919 228-1371

GROCE, JAMES GRAY P 092
508 RALPH DR. AC
CARY 27511 919 733-5540

GRODE, HARVEY E. IM /ON 098
WILSON CLINIC A AC
WILSON 27893 919 291-7001

GRODE, MICHAEL JAMES PD 060
149 PROVIDENCE ROAD AC
CHARLOTTE 28207 704 372-6525

GROMET, MATTHEW DR 060
CHARLOTTE RADIOLOGY AC
PO BOX 36937
CHARLOTTE 28236 704 362-1945
FAX 704 362-7081

GROOVER, CALTON DOUGLAS PTH 060
P. O. BOX 32861 AC
CHARLOTTE 28232 704 338-3227

GROSS, JEFFREY LOUIS ORS 067
128 MEMORIAL DRIVE A AC
JACKSONVILLE 28540 919 353-4500

GROSSMAN, HERMAN LEWIS PDR /PD 032
BOX 3834, DUMC AC
DURHAM 27710 919 681-2711

GROSSMAN, JOEL SCOTT 034
1721 ELIZABETH AVE. A S
WINSTON-SALEM 27103 919 725-1557

GROSSMAN, SARAH RONA 034
5125 TRAILWAY DR. S
ROCKVILLE, MD 20853

GROTE, THOMAS H. ON /IM 034
3314 HEALY DR., STE. 107 A AC
WINSTON-SALEM 27103 919 768-2521

GROVE, DAVID DWIGHT IM /CD 041
1511 WESTOVER TERRACE AC
GREENSBORO 27408 919 373-1184
FAX 919 373-1589

GRUBB, STEPHEN ALLEN ORS 032
101 CONNER DR. STE. 200 A AC
CHAPEL HILL 27514 919 929-7796

GRUBB, STEPHEN DALE FP 024
PIREWAY RD. A P AC
PO BOX 675
TABOR CITY 28463 919 653-2113

GRUBB, WALTER LEE, JR. DR 060
CHARLOTTE RADIOLOGY A AC
PO BOX 36937
CHARLOTTE 28236 704 362-1945
FAX 704 362-7081

GRUHN, WILLIAM BRYANT IM 060
10724 PARK RD., STE. 208 AC
CHARLOTTE 28210 704 372-8750

GUAJARDO, CESAR PYA /P 032
20 W. COLONY PL., STE. 160 AC
DURHAM 27705 919 489-2878

GUALTIERI, C. THOMAS P /CHP 032
212 W. ROSEMARY ST. AC
CHAPEL HILL 27516 919 933-2000

GUARINO, GUY JOSEPH PTH 018
ROUTE #2, BOX 197 A AC
CONOVER 28613 704 322-3821

GUARINO, ROSARIO N 064
2412 PROFESSIONAL DR. A C
BOX 7504
ROCKY MOUNT 27801 919 443-0041

GUAY, PAUL FERNAND DR 098
3007 WOLF TRAP DR. AC
WILSON 27893 919 399-8112

GUERRA, MARC FRANCIS FP 014
912 CONNELLY SPRINGS RD. AC
LENOIR 28645 704 728-8224

GUESS, HARRY ADELBERT PD /PH 032
104 WATERFORD PL. A AC
CHAPEL HILL 27514 919 248-2793
FAX 919 966-2089

GUEST, CHRIS WARREN IM /OM 041
102 POMONA DRIVE A * AC
GREENSBORO 27407 919 299-0000

GUIJARRO, JOSE JULIO, JR. GS /TS 096
1008 E. ASH ST. C
GOLDSBORO 27530 919 734-1141

GUILFORD, WILLIAM BONNER DR 060
CHARLOTTE RADIOLOGY AC
PO BOX 36937
CHARLOTTE 28236 704 362-1945

GUITERAS, GEORGE PATRICK FP 032
120 CONNER DR., STE. 200 AC
CHAPEL HILL 27514 919 967-8291

GULLEDGE, SIDNEY LOY, III OPH 092
4301 LAKE BOONE TR.,STE. 200 A AC
RALEIGH 27607 919 782-5210

GULLEY, MARCUS MARCELLUS P 034
300 S. HAWTHORNE RD. A AC
DEPT. OF PSYCHIATRY
WINSTON-SALEM 27103 919 748-4554

GULYN, ANNA BAUHOFER GP 080
117 PINETREE ROAD P AC
SALISBURY 28144 704 638-9000

GULYN, BOHDAN EMANUEL P /GP 080
117 PINETREE ROAD A RT
SALISBURY 28144 704 633-7770

GUNNELLS, JAMES CAULIE NEP /IM 032
BOX 2991, DUMC A AC
DURHAM 27710 919 684-5038

GUNTER, JUNE U. PTH 032
1411 N. MANGUM STREET A L/RT
DURHAM 27701 919 688-3457

GUNTER, WM. B., JR. OBG 032
209 E. CARVER ST. A AC
DURHAM 27704 919 471-2273

GUNTHER, ROBERT CLARENCE AN 011
25 LAWRENCE PLACE A AC
ASHEVILLE 28801 704 252-1016

GUPTA, GOOL KAPADIA PUD /IM 096
2704 MEDICAL OFFICE PLACE AC
GOLDSBORO 27530 919 736-4724

GUPTA, JAGMOHAN DASS CD /IM 096
2704 MEDICAL OFFICE PLACE AC
GOLDSBORO 27530 919 736-4724

GUTMAN, ROBERT ALLAN NEP /IM 032
2609 N. DUKE ST., STE. 604 A AC
DURHAM 27704 919 220-5761
FAX 919 220-6378

GUTSCH, DAVID EDWARD 032
100 ROCK CREEK DR., APT. H-102 R
CARRBORO 27510 919 966-2536

GUTTER, GUIDO PETER PS 032
3901 N. ROXBORO RD. AC
PO BOX 15249
DURHAM 27704 919 479-4100

GUTTLER, SANFORD DENNIS FP 018
1 TRADE STREET AC
GRANITE FALLS 28630 704 396-3136

GUY, CLIFFORD RICHARD CD /IM 034
250 CHARLOIS BOULEVARD AC
WINSTON-SALEM 27103 919 768-4730
FAX 919 659-1835

GUYER, EVA RUTH WARD FP 041
6303 WESTWIND DR. A AC
GREENSBORO 27410 919 230-0016

GUZMAN, ROSA NIVEA 034
300 S. HAWTHORNE RD A R
WINSTON-SALEM 27103 919 748-4218

GWINN, MICHAEL DALE PM 092
3320 WAKE FOREST RD., STE. 430 A AC
RALEIGH 27609 919 876-7676

GWYN, PAUL PERKINS, JR. PS /GS 034
2901 MAPLEWOOD AVENUE AC
WINSTON-SALEM 27103 919 765-8620

GWYNNE, JOHN THOMAS END 032
234 HUNTINGTON DRIVE AC
CHAPEL HILL 27514 919 966-3338

HA, KHIE SEM FP 078
229 S. MAIN STREET AC
RED SPRINGS 28377 919 843-4117

HAAK, EDWARD DECKER, JR. IM /CD 076
208 FOUST ST. AC
P. O. BOX 2839
ASHEBORO 27203 919 625-4020

HAAKENSON, GARY ALVIN OBG 092
3126 BLUE RIDGE RD. A AC
RALEIGH 27612 919 782-3865

HAAR, FREDERICK BEHREND PD 074
610 S. OAK STREET A L
GREENVILLE 27834 919 752-2039

HAAS-WESTON, CARLOS FIACRO IM 026
3629 CAPE CENTER DR. AC
FAYETTEVILLE 28304 919 323-8335

HABEL, DAVID CHRISTOPHER 032
2511 HIGHLAND AVE. R
DURHAM 27704 919 684-8111

HABER, ROBERT HUGH IM /CD 060
1001 BLYTHE BLVD. #300 A AC
CHARLOTTE 28203 704 373-1503

HABERKERN, ROY CONRAD CHP /P 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-4220

HADDOCK, AMOS EARL CD /CD 050
201 ASHEVILLE HGWY.,STE 203 AC
SYLVA 28779 704 586-7451

HADI, HAMID A. 074
ECU SCHOOL OF MEDICINE AC
DEPT. OF OB/GYN
GREENVILLE 27858 919 551-4662

HADLER, NORTIN MARVIN RHU /IM 032
UNC, DEPT. OF MEDICINE AC
CHAPEL HILL 27599 919 966-4191
FAX 919 966-1739

HADLEY, ROBERT PURCELL PTH 007
P. O. BOX 1328 A AC
WASHINGTON 27889 919 946-9074

HAGAMAN, LEN DOUGHTON GP 095
300 CHERRY DR. L/RT
BOONE 28607 704 264-8414

HAGGERTY, JESSE CORNELIUS,III FP 074
ECU SCHOOL OF MEDICINE A AC
DEPT. OF FAMILY MEDICINE
GREENVILLE 27858 919 551-2587
FAX 919-551-3040

HAGINS, DAVID MICHAEL OBG 054
KINSTON CLINIC NORTH A AC
KINSTON 28501 919 522-4333

HAGLER, DAN N. IM /ID 060
125 BALDWIN AVE. A AC
CHARLOTTE 28204 704 338-6300

HAHN, MICHAEL WAYNE OBG 025
801 MCCARTHY BLVD. A AC
NEW BERN 28560 919 633-3942

HAHN, PAULETTE C. 074
404 ROTARY AVE. A S
GREENVILLE 27858 919 758-1727

HAHNER, MATTHEW GS 011
675 BILTMORE AVE., STE. D A AC
ASHEVILLE 28803 704 251-2523

HAINES, CARROLL FOGG, JR. OPH 079
515 THOMPSON ST., STE. A AC
EDEN 27288 919 627-5271

HAINES, RICHARD LITTLETON IM /GP 065
HIGHWAY 17, AC
P. O. BOX 565
HAMPSTEAD 28443 919 270-3561

HAIR, GLENN EDGAR OT /OTO 026
3314 MELROSE ROAD A AC
FAYETTEVILLE 28304 919 323-1463

HAIRFIELD, BEVERLY DEW GS 012
604 W. UNION ST. L/RT
HIGHWAY #18 SOUTH, SUITE #157
MORGANTON 28655 704 437-3362

HAISTY, WESLEY KENNETH, JR. CD /IM 034
300 S. HAWTHORNE ROAD AC
WINSTON-SALEM 27103 919 748-4673

HAITHCOCK, WILLIAM DANA, JR. OBG 026
1219 WALTER REED ROAD A AC
FAYETTEVILLE 28304 919 323-2103

HAIZLIP, THOMAS MATTHEWS CHP /P 092
5201 REMBERT DRIVE A AC
RALEIGH 27612 919 733-5344

HAJISHEIKH, MOOSA CD /IM 077
P. O. BOX 1537 A AC
ROCKINGHAM 28379 919 997-3177

HALE, LAURA POPE 032
6512 CRAIG ROAD A S
DURHAM 27712 919 471-0865

HALE, LESLIE MORGAN OPH 032
110 CONNER DR. STE. #2 A AC
CHAPEL HILL 27514 919 942-8701

HALE, ROBERT VERNON OPH 032
110 CONNER DR. STE. #2 A AC
CHAPEL HILL 27514 919 942-8701

HALE, WAYNE A. FP /GER 041
1125 N. CHURCH ST. A AC
GREENSBORO 27401 919 379-3582

HALL, BAHNSON DAVID OBG 080
315 MOCKSVILLE AVENUE A AC
SALISBURY 28144 704 636-9270

HALL, BRENT DWAYNE 074
4661-J HOPE VALLEY RD. R
DURHAM 27701 919 752-7222

HALL, BRUCE LEE 032
#9 GEORGETOWN CT. S
DURHAM 27705 919 383-9784

HALL, CHRISTOPHER STERLING 034
1706 LYNWOOD AVE. A S
WINSTON-SALEM 27104 919 727-7534

HALL, COLIN DAVID N 032
UNC, DEPT. OF NEUROLOGY A AC
CHAPEL HILL 27599 919 966-5522

HALL, DANIEL CRAWFORD FP 077
1219 ROCKINGHAM RD. AC
SUITE #11, VILLAGE PLAZA
ROCKINGHAM 23879 919 895-1989

HALL, DAVID HARTMAN FP 060
910 N. ALEXANDER ST. AC
CHARLOTTE 28206 704 355-3084

HALL, DONALD GAMMON CD 060
1001 BLYTHE BLVD. #300 AC
CHARLOTTE 28203 704 373-1503

HALL, GEORGE DANIEL FP 060
3109 WILLOW OAK RD. A AC
CHARLOTTE 28209 704 392-1847

HALL, GREGORY GRAYSON AN 065
2144 ECHO LANE AC
HALL, JAMES BRYAN OBG /ON 060
1901 BRUNSWICK AC
CHARLOTTE 28207 704 331-3149

HALL, JAMES GRAYSON FP 086
P. O. BOX 158 A P * AC
DOBSON 27017 919 386-8270

HALL, JAMES SAMUEL PD 026
3415-C MELROSE ROAD AC
FAYETTEVILLE 28304 919 484-8163

HALL, JOHN HOWLAND D 041
1301 W. WENDOVER AVE. A AC
WENDOVER MEDICAL PK.
GREENSBORO 27408 919 272-3152

HALL, JOHN MOIR GP 086
357 IVY CIRCLE A L/RT
ELKIN 28621 919 835-4534

HALL, JOSEPH CULLEN OBG 080
305 STUART DRIVE A P L/RT
SALISBURY 28144 704 633-9508

HALL, LOCKSLEY S. GS 086
L.C. HOOTS MEMORIAL HOSPITAL AC
YADKINVILLE 27055 919 679-2041

HALL, MARY NOLAN FP 060
PO BOX 32861 A AC
CAROLINAS MEDICAL CENTER
CHARLOTTE 28232 704 355-3172

HALL, SUSAN MARIE OPH 060
2015 RANDOLPH RD., STE. 108 AC
CHARLOTTE 28207 704 334-2020

HALL, WARNER LEANDER, JR. OBG 092
P. O. BOX 18568 AC
RALEIGH 27619 919 782-1273

HALL, WILLIAM ERNEST FP 053
555 CARTHAGE RD. AC
LOWER LEVEL
SANFORD 27330 919 775-1000

HALL, WILLIAM JAMES, JR. OTO 025
P. O. BOX 2406 A AC
NEW BERN 28561 919 638-2666

HALLOCK, JAMES ANTHONY PD 074
OFFICE OF THE DEAN,AD 48 A * AC
ECU SCH. OF MED. BRODY BLDG.
GREENVILLE 27858 919 551-2201

HALPERIN, EDWARD CHARLES TR 032
BOX 3085, DUMC * AC
DURHAM 27710 919 684-3196
FAX 919 684-3953

HAMAD, MAZEN E.Z. FP 092
3100 DURALEIGH RD. AC
RALEIGH 27612 919 881-5300

HAMAD, SABAH 074
128 STEEPLECHASE RD. S
ROCKY MOUNT 27804 919 937-4451

HAMATY, DANIEL IM /RHU 060
140 NIBLICK CT. A AC
DENVER 28037 704 372-3714

HAMBRIGHT, RUFUS ROBERTS GYN 041
9-B FOUNTAIN MANOR DR. L/RT
GREENSBORO 27405 919 273-2563

HAMBRIGHT, WESLEY F. OBG 067
1701 COUNTRY CLUB RD. A * AC
JACKSONVILLE 28540 919 353-4333

HAMBY, GEORGE WALTERS P 032
DOCTOR'S BUILDING, WILLOW DR. AC
CHAPEL HILL 27514 919 929-6155

HAMBY, JAMES LAWRENCE U 095
WATAUGA MED. ARTS. BLDG. A P AC
BOONE 28607 704 264-5150

HAMER, ALFRED WILSON, JR. OBG 012
103 MEDICAL HEIGHTS DR. AC
MORGANTON 28655 704 437-6122
FAX 704 438-1025

HAMILTON, BRIAN HUGH 032
LAUREL RIDGE APTS. #32 A S
HIGHWAY 54 BYPASS
CHAPEL HILL 27516 919 967-9462

HAMILTON, BUFORD LINDSAY, JR. FP /GP 049
P. O. BOX 8 AC
STONY POINT 28678 704 585-2953

HAMILTON, GENE THOMAS ORS 074
622 MEDICAL DR. A * AC
GREENVILLE 27834 919 752-4613

HAMILTON, JAMES PRESSLY PDS 060
2104 RANDOLPH ROAD AC
CHARLOTTE 28207 704 377-3900

HAMILTON, WILLIAM GODFREY FP 011
P. O. BOX 429 AC
FAIRVIEW 28730 919 628-2225

HAMMER, DONALD EDWIN GS 060
2206 CUMBERLAND AVENUE AC
CHARLOTTE 28203 704 375-3504

HAMMER, DOUGLAS IRA EM /GPM 092
PO BOX 30786 A P AC
RALEIGH 27622 919 847-8821

HAMMES, STEPHEN R. 032
622-R E. KNOX ST. A S
DURHAM 27701 919 684-8243

HAMMETT, ELLIOTT BRIAN P 032
V.A. HOSPITAL 116-A A AC
DURHAM 27705 919 286-0411

HAMMOCK, RONALD MACK U 067
200 DOCTOR'S DR. SUITE C AC
JACKSONVILLE 28546 919 353-9994

HAMMOND, ALFRED FRANKLIN, JR. GP 025
1514 TRENT BOULEVARD A L/RT
NEW BERN 28560 919 637-6066

HAMMOND, CHARLES B. OBG /END 032
BOX 3853, DUMC AC
DURHAM 27710 919 684-3008
FAX 919 684-6161

HAMMONDS, MAX WAYNE AN 045
334 BROOKSIDE CAMP RD. A AC
HENDERSONVILLE 28792 704 692-8688

HAMMONDS, ROBERT EUGENE OTO /PS 013
113 COUNTRY CLUB DR. A AC
CONCORD 28025 704 788-2154

HAMPTON, CYNTHIA ANNE OPH 091
1924 RUIN CREEK RD. STE. 204 A AC
HENDERSON 27536 919 492-8021

HAMPTON, JAMES HARRIS, JR. FP 034
PO BOX 325 A AC
SUNNY ACRES SHOPPING CTR.
LEWISVILLE 27023 919 945-5846

HAMRICK, ALGER VASON, III FP 092
1109 DRESSER COURT AC
RALEIGH 27609 919 872-4900

HAMRICK, JOHN CARL GS 023
P. O. BOX 668 A L/RT
SHELBY 28150 704 487-5132

HAMRICK, JOHN CARL, JR. ORS 023
110 W. GROVER STREET A AC
SHELBY 28150 704 487-1177

HAMRICK, LADD WATTS, JR. IM /NM 013
390 COPPERFIELD BLVD. A AC
CONCORD 28025 704 782-3135

HAMSTEAD, STEVEN LYNN IM 074
201 N. MAIN ST. AC
FARMVILLE 27828 919 753-7141

HAN, GWANG SOO OBG 050
19 CENTRAL STREET A AC
SYLVA 28779 704 586-4096

HANCOCK, GEORGE MARVIN GS 014
PO BOX 1648 A AC
LENOIR 28645 704 758-5501

HANCOCK, RICHARD PAUL GS /TS 043
702 TILGHMAN DR. A AC
DUNN 28334 919 892-8120

HANCOCK, WILLIAM FRANKLIN, JR. PTH 001
1303 W. DAVIS ST. A AC
BURLINGTON 27215 919 226-0196

HAND, LEROY CORBETT, JR. FP /EM 070
104 HAVENWOOD DRIVE L/RT
CAMDEN 27921 919 335-0531

HANLEY, EDWARD N., JR. ORS 060
PO BOX 32861 A AC
CAROLINAS MED. CTR.
CHARLOTTE 28232 704 355-4257

HANNA, DONALD PAUL PS /GS 092
103 BAINES COURT A AC
CARY 27511 919 467-1929

HANNA, LINDA J. NM /GS 095
PO BOX 526 A C
BLOWING ROCK 28605 704 295-7840

HANNA, PAMELA GAYLE AN 060
20318 NORMAN COLONY RD AC
METROLINA ANES. GROUP
CHARLOTTE 28236 704 379-5955

HANNA, RICHARD TINSLEY FP /HYP 060
6900 FARMINGDALE DRIVE AC
CHARLOTTE 28212 704 536-1362

HANNAH, FRANK THOMAS OPH 023
313 S. WASHINGTON STREET * AC
SHELBY 28150 704 482-0696

HANRAHAN, LEO ROBERT, JR. PTH /BLB 074
ECU SCHOOL OF MEDICINE A P AC
DEPT. OF PATHOLOGY
GREENVILLE 27858 919 551-2806

HANSCOM, ALFRED CARLETON EM /FP 011
RT. #11, BOX 260 A AC
HENDERSONVILLE 28792 704 693-7623

HANSEN, ALFRED ROY EM /FP 032
522 DOGWOOD DR. * AC
CHAPEL HILL 27516 919 966-5643

HANSEN, KIMBERLEY J. GS /VS 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4151
FAX 919 748-5414

HANSON, JOHN STEPHEN GE /IM 060
1718 E. 4TH ST., STE. 607 AC
CHARLOTTE 28204 704 375-9484

HANSPAL, PRITHVI PAL SINGH U 076
171 MCARTHUR STREET AC
P. O. BOX 1509
ASHEBORO 27203 919 625-3997

HAPKE, EDITH JOSEPHINE PUD /IM 011
70 WOODFIN PL., STE. 304 A AC
ASHEVILLE 28801 704 254-8878

HARANATH, BOGOLU S.S. DR 026
3677 GLEN BARRY CIR. AC
FAYETTEVILLE 28304 919 323-2012

HARBEN, DOUGLAS JAMES D /IM 060
3535 RANDOLPH RD., STE. 101-W A AC
CHARLOTTE 28211 704 364-6110

HARBOLD, NORRIS BROWN, JR. CD /IM 060
1001 BLYTHE BLVD. #300 A AC
CHARLOTTE 28203 704 373-1503

HARDAKER, WILLIAM T., JR. ORS 032
BOX 3956, DUMC A AC
DURHAM 27710 919 684-5334
FAX 919 684-8666

HARDAWAY, DAVID M. U 018
1202 N. CENTER ST. A AC
HICKORY 28601 704 322-4340
FAX 704 323-8450

HARDEMAN, RICHARD AUSTIN FP 023
616 E. MARION STREET AC
SHELBY 28150 704 487-6338

HARDIE, GREGORY STEVEN AN 034
408 FORSYTH MEDICAL PK AC
WINSTON-SALEM 27103 919 768-7680

HARDIN, JAMES BENFORD FP 078
206 W. 28TH STREET AC
LUMBERTON 28358 919 739-8164

HARDING, ROBERT WILLIAM IM 081
NORRIS-BIGGS CLINIC AC
RUTHERFORDTON 28139

HARDISON, JOE WILLIAM OBG /GE 026
1320 MEDICAL DRIVE A AC
FAYETTEVILLE 28304 919 323-3301

HARDISON, JOSEPH H.,JR. IM /GE 092
2801 LAKEVIEW A RT
RALEIGH 27609 919 872-4850

HARDISON, MITCHELL DALE IM 092
3900 BROWNING PL. C
RALEIGH 27609 919 781-9650

HARDY, IRA MAY, II NS 074
2325 STANTONSBURG RD. A AC
GREENVILLE 27834 919 752-5156

HARDY, JAMES JOSEPH OBG 060
150 PROVIDENCE RD. A AC
CHARLOTTE 28207 704 377-0461

HARDY, JOHN GREGG N 074
2501 STANTONSBURG RD. AC
GREENVILLE 27834 919 752-4848

HARE, HUGH GERALD IM 034
250 CHARLOIS BLVD. AC
WINSTON-SALEM 27103 919 765-3855

HARE, ROY ALLEN IM 032
2609 N. DUKE ST., STE. 205 A AC
DURHAM 27704 919 471-8481

HARKER, MARGARET NELSEN GP 016
P. O. DRAWER 897 A * AC
MOREHEAD CITY 28557 919 247-3476

HARKINS, PAUL DUANE ORS /HS 041
1505 WESTOVER TERR. A AC
GREENSBORO 27408 919 275-0927

HARLAN, STEVEN DANE R 018
P. O. BOX 308 A AC
HICKORY 28603 704 322-2644

HARLESS, JAMES M. 034
307 FOXCROFT DR. S
WINSTON-SALEM 27103 919 768-4780

HARLEY, STEWART JACQUES ORS 044
114 HOSPITAL DRIVE AC
CLYDE 28721 704 452-2218

HARMAN, JOHN SIMON U 001
1610 VAUGHN ROAD A AC
BURLINGTON 27215 919 227-2761

HARMEL, MEREL HILBER AN 032
BOX 3094, DUMC A L/RT
DURHAM 27710 919 684-2945

HARMON, PERRY MONROE OBG 026
3613 CAPE CENTER DR. AC
FAYETTEVILLE 28304 919 483-6677

HARMON, RAYMOND HARRIS OPH 095
120 HIGHLAND AVENUE A L/RT
BOONE 28607 704 264-8669

HARNED, HERBERT SPENCER, JR. PDC 032
803 SPRING DELL LANE L/RT
CHAPEL HILL 27514 919 966-4601

HARNED, ROBERT G. 011
603 BILTMORE AVE. AC
ASHEVILLE 28801 919 924-2340

HAROUNY, VICTOR ROBERT OBG 060
150 PROVIDENCE RD. A AC
CHARLOTTE 28207 704 377-0461

HARPER, CHARLES A., JR. OBG 041
WOMEN'S HOSP. OF GREENSBORO A AC
801 GREEN VALLEY RD.
GREENSBORO 27408 919 691-6877

HARPER, DAVID KEITH OPH 013
500 LAKE CONCORD RD., NE A P AC
CONCORD 28025 704 782-1127

HARPER, JAMES ROBINSON IM /CD 032
891 W. WILLOW DRIVE AC
CHAPEL HILL 27514 919 942-5123

HARPER, LARRY OLEN IM /END 001
KERNODLE CLINIC, INC. A AC
BURLINGTON 27217 919 227-3621

HARPER, MARGARET A. OBG /NPM 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-4595

HARPER, MATT CLEVELAND, JR. GP 054
CHERRY HOSP., CALLER BOX 8000 AC
GOLDSBORO 27530 919 522-3162

HARPER, ROBERT NORMENT, JR. GE /IM 092
3320 WAKE FOREST RD. AC
RALEIGH MEDICAL PLAZA
RALEIGH 27609 919 872-4850

HARPER, ROBERT NORMENT, SR. P 092
3153-G GLENWOOD PROF. VILL. AC
RALEIGH 27608 919 782-1555

HARPER, WAYNE LEE IM 092
3100 BLUE RIDGE RD. P AC
RALEIGH 27612 919 781-7500

HARR, CHARLES DULANEY GS /CDS 034
719 WESTVIEW DRIVE A R
WINSTON-SALEM 27103 919 748-2011

HARR, DEBRA M. B. TR 034
719 WESTVIEW DR. A AC
WINSTON-SALEM 27103 704 322-0856

HARRELL, LONNIE CLAYTON, III OBG 060
150 PROVIDENCE ROAD A AC
CHARLOTTE 28207 704 377-0461

HARRELL, WADE WHITLEY OPH 040
319 WESTWOOD AVENUE A AC
HIGH POINT 27262 919 883-7867

HARRELL, WARREN LAMAR, JR. R 023
1237 BROOKWOOD DRIVE A AC
SHELBY 28150 704 482-3880

HARRELL, WILLIAM FLETCHER, JR. PD 070
1142 N. ROAD ST. A L/RT
ELIZABETH CITY 27909 919 338-6359

HARRELSON, JOHN MILES ORS /PTH 032
BOX 3023, DUMC A AC
DURHAM 27710 919 684-5304

HARRINGTON, LEE, JR. OM /IM 034
2340 OLIVET CHURCH ROAD A L/RT
WINSTON-SALEM 27106 919 924-4179

HARRIS, BRUCE C. GS 049
PO BOX 1460 AC
STATESVILLE MEDICAL GROUP
STATESVILLE 28677 704 878-2011

HARRIS, CARLTON MCKENZIE IM 041
#2 NEW BERN SQUARE A L/RT
GREENSBORO 27408 919 282-8111

HARRIS, CHARLES ODELL OBG 032
400 CRUTCHFIELD ST. STE. B AC
DURHAM 27704 919 471-1573

HARRIS, CHARLES THEODORE, JR. AN 060
401 FESBROOK COURT L/RT
CHARLOTTE 28270 704 364-0514

HARRIS, CHARLES WALKER CD /IM 060
125 BALDWIN AVE. A AC
CHARLOTTE 28204 704 374-1696

HARRIS, JAMES TODD 074
APT. B-4, DOCTOR'S PARK S
GREENVILLE 27834 919 830-6868

HARRIS, JEFFREY DAVISON FP 018
HIGHWAY 127 NORTH DE
P. O. BOX 6050
HICKORY 28603 704 495-8226

HARRIS, JEFFREY E. ID /IM 065
1515 DOCTORS CIR. AC
WILMINGTON 28401 919 763-5182

HARRIS, JOHN JOEL AN 078
2501 KENAN AVE. A AC
LUMBERTON 28358 919 738-8155

HARRIS, LARRY COLEMAN PD 026
P. O. BOX 40405 A AC
FAYETTEVILLE 28309 919 323-4281

HARRIS, LAWRENCE STANLEY FOP /NA 074
ECU SCHOOL OF MEDICINE A AC
DEPT. OF CLINICAL PATH.
GREENVILLE 27858 919 551-4655
FAX 919 551-3320

HARRIS, MARY BOGGS OBG 078
2501 KENAN A AC
LUMBERTON 28358 919 738-9601

HARRIS, MICHAEL ALAN P 067
PO BOX 3120, CRS AC
JOHNSON CITY, TN 37602

HARRIS, MILTON DEAN CD /IM 034
3073 TRENWEST DR. A AC
WINSTON-SALEM 27103 919 768-0437
FAX 919 768-0433

HARRIS, ROBERT THOMAS IM /PYM 092
3320 WAKE FOREST RD. AC
RALEIGH 27609 919 872-4850

HARRIS, SAMUEL RANCHOR OBG 029
7 MEDICAL PARK DRIVE A AC
LEXINGTON 27292 704 243-2431

HARRIS, THOMAS REGINALD PUD /IM 023
808 SCHENCK STREET A * AC
SHELBY 28150 704 482-1482

HARRIS, TYNDALL PEACOCK IM 032
P. O. BOX 3118 L/RT
CHAPEL HILL 27515 919 489-7371

HARRIS, WILLIAM RANDALL, IV 060
4053 ARBOR WAY A R
CHARLOTTE 28211 704 338-3172

HARRIS, WILLIAM RIX OPH 018
P. O. BOX 2588 AC
HICKORY 28603 704 322-2050

HARRISON, FRANK N.H., JR. OBG 060
PO BOX 32861 A AC
CAROLINAS MEDICAL CENTER
CHARLOTTE 28232 704 364-3760

HARRISON, LLOYD HERRITAGE U 034
300 S. HAWTHORNE RD. A * AC
WINSTON-SALEM 27103 919 748-4131

HARRISS, WILLIAM FRED R 040
P. O. BOX 5007 A AC
HIGH POINT 27262 919 884-6037

HARSHAW, CHARLES WILLIAM, JR. CD /IM 041
P. O. BOX 20928 AC
GREENSBORO 27420 919 275-8581

HARSHBARGER, JOHN LYNN RHU /IM 065
1202 MEDICAL CENTER DR. AC
WILMINGTON 28401 919 341-3350

HARSTON, PHILLIP REED OBG 060
2711 RANDOLPH RD. STE. 512 AC
CHARLOTTE 28207 704 333-4104

HART, ANDREW PAUL AN 011
202 DOCTORS BLDG. A AC
ASHEVILLE 28801 704 254-1969

HART, ELZIE FRANKLIN, JR. OTO /PS 012
PO DRAWER 340 AC
MORGANTON 28655 704 433-6410

HART, OLIVER JAMES, III U 034
278 FLINTSHIRE RD. A AC
WINSTON-SALEM 27104 919 768-0735

HART, OLIVER JAMES, JR. U 034
1806 S. HAWTHORNE ROAD A AC
WINSTON-SALEM 27103 919 768-0735

HART, OLIVER JAMES, SR. U 034
1930 GEORGIA AVENUE A L/RT
WINSTON-SALEM 27104 919 722-6598

HART, ROBERT WILLIAM, III FP 018
221 13TH AVENUE PL., NW A AC
HICKORY 28601 704 322-5800
FAX 704 324-9526

HART, TIMOTHY BERTRAND IM /PUD 092
3320 WAKE FOREST RD. AC
RALEIGH 27609 919 872-4850

HARTLE, EDGAR OWEN EM 060
821 MT. VERNON AVE. AC
CHARLOTTE 28203 704 334-8419

HARTMAN, EDWIN LONZO IM 051
515 N. EIGHTH STREET AC
SMITHFIELD 27577 919 934-1211

HARTMANN, THOMAS MICHAEL DR 011
PO BOX 2959 AC
ASHEVILLE 28802 704 254-4617

HARTNESS, ALBERT R. FP 049
RT. #2, BOX 386-B AC
DENVER 28037 919 483-9385

HARTNESS, ALVIN HUNTER PD 026
PO BOX 43505 A AC
FAYETTEVILLE 28309 919 323-4571

HARTNESS, JOHN FREDERICK, JR. IM /EM 090
1307 DOVE STREET AC
MONROE 28110 704 289-6474

HARTNESS, WILLIAM RUFUS, JR. FP 053
615 CARR STREET A L/RT
SANFORD 27330 919 775-3491

HARTSELL, CHARLES JACOB, JR. AN 063
MOORE MEMORIAL HOSPITAL AC
PINEHURST 28374 919 295-6861

HARTSFIELD, DONALD W. FP 087
BOX 427 AC
BRYSON CITY 28713 704 488-2283

HARTSOCK, LANGDON ALL ORS 032
2413 DELLWOOD DR. R
DURHAM 27705 919 684-8111

HARTZOG, HENRY GERARD, III GS 092
PO BOX 32090 AC
RALEIGH 27622 919 781-0710

HARVELL, JAMES C., JR. ORS 074
604 MEDICAL DR. A AC
GREENVILLE 27834 919 758-1777
FAX 919 758-7484

HARVEY, DAVID L. IM /NEP 018
1985 TATE BLVD. P AC
750 FIRST PLAZA
HICKORY 28602 704 327-7788

HARVEY, WALLACE WATSON, JR. GP /AM 070
312 NORTH ST. A AC
PORTSMOUTH, VA 23704 804 399-4216

HARVIN, ALLAN BRABHAM ORS /AM 096
RT. #7, BOX 54 A RT
GOLDSBORO 27530 919 734-1930

HARWOOD, TIMOTHY NEIL AN 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4498

HASHWAY, THOMAS, JR. IM /CD 034
1701 BRIAR LAKE RD. AC
WINSTON-SALEM 27104 919 768-4730

HASKETT, JOSEPH RAY, JR. IM 021
PO BOX 1210 A AC
EDENTON INTERNAL MED. PA
EDENTON 27932 919 482-5171

HASLAM, JOHN BATTLE TR 011
200 DOCTOR'S BLDG. A AC
ASHEVILLE 28801 704 255-4100

HASSELL, CHARLES M., JR. PTH /DMP 041
1200 N. ELM STREET A AC
GREENSBORO 27401 919 379-4074

HASSELMAN, CARL THOMAS 032
1909 YEARBY AVE., APT. E A S
DURHAM 27705 919 684-6665

HASSLER, ROBERT EMIEL OBG 010
#16 MEDICAL CENTER DR. A AC
SUPPLY 28462 919 754-9166

HATCH, STEPHEN J. 034
4104 MOSS BROOK DR. S
WINSTON-SALEM 27127 919 784-0567

HATCHER, MARTIN ARMSTEAD N 041
1305 W. WENDOVER AVENUE A AC
GREENSBORO 27408 919 275-0779

HATCHER, PAUL ARTHUR U /AM 000
1510 DAMON COURT, SE R
ROCHESTER, MN 55904 507 282-6835

HATCHER, WALTER BENJAMIN PTH /DR 074
108-B CONCORD DR. A R
GREENVILLE 27834 919 355-8725

HATTAWAY, ALEXANDER C.,III OTO /HNS 092
3010 ANDERSON DR. AC
PO BOX 18946
RALEIGH 27619 919 787-7171

HATTEN, H. PAUL, JR. DR 032
DUMC, BOX 3808 A AC
DURHAM 27710

HAUCH, THOMAS WRAY ON /HEM 060
MECKLENBURG MEDICAL GROUP A AC
3535 RANDOLPH RD. #W300
CHARLOTTE 28211 704 365-0760

HAUPT, RONALD ANTHONY EM /FP 005
ROUTE #2, BOX 294 C
LANSING 28643 919 384-3708

HAUSCH, RAYMOND CHARLES 032
110 CHAUCER CT. S
CARRBORO 27510 919 967-7296

HAVEN, ANDREW EDDY OBG 074
2245 STANTONSBURG RD.,STE.H AC
GREENVILLE 27834 919 757-3131

HAVERKAMP, JOHN D 096
619 PARK AVE. A P * AC
GOLDSBORO 27530 919 734-0944

HAWES, MARY LINDA IM /NEP 064
100 NASH MEDICAL ARTS MALL A AC
ROCKY MOUNT 27801 919 443-9084

HAWES, SAMUEL PINCKNEY, III U 060
1333 ROMANY ROAD AC
CHARLOTTE 28204 704 372-5180

HAWES, STEPHEN JAMES, JR. ID /IM 060
1928 RANDOLPH RD., STE. 314 A P AC
CHARLOTTE 28207 704 331-9413

HAWK, ROBERT JOE OBG 088
1220 ASHEVILLE HIGHWAY A AC
BREVARD 28712 704 883-8115

HAWK, RODNEY JAMES OTO 045
512 PARK HILL CT. AC
HENDERSONVILLE 28739 704 693-0706

HAWKINS, BARRY FUGH IM 013
PO BOX 2958 L/RT
CONCORD 28025 704 782-1101

HAWKINS, HAL BURGESS FP 097
11 GREEN WAY A L/RT
WILKESBORO 28697 919 838-5459

HAWKINS, JAMES HUBERT, SR. GP 001
P. O. BOX 476 AC
GRAHAM 27253 919 227-7496

HAWKINS, MICHAEL MILLS 000
28 BROOKWOOD AVE. R
WILMINGTON 28403 919 343-7000

HAWKINS, SARALYN REID 032
4800 UNIVERSITY DR. APT. 13-B S
DURHAM 27707 919 493-6525

HAWORTH, CHESTER CARL, JR. N /IM 040
624 QUAKER LANE, SUITE 211-B A P AC
HIGH POINT 27262 919 889-1496

HAWTHORNE, HENRY CLAIBORNE, JR PD 065
1920 S. 16TH STREET AC
WILMINGTON 28401 919 763-2072

HAYDON, FRANK A. ORS 056
PO BOX 660 AC
FRANKLIN 28734 704 369-6380

HAYE, HENRY SOLOMON OBG 067
PO BOX 1229 AC
JACKSONVILLE 28541 919 346-2182

HAYEK, CHARLES S. PD 023
101 GROVER ST. A AC
SHELBY 28150 704 482-1435

HAYES, BENNETT ALLEN, JR. OBG 026
1219 WALTER REED ROAD A AC
FAYETTEVILLE 28304 919 323-2103

HAYES, DAVID ALLEN CCM /IM 092
3320 WAKE FOREST RD. AC
PO BOX 18700
RALEIGH 27609 919 878-0361
FAX 919 878-9260

HAYES, DONALD MICHAEL OM /IM 034
SARA LEE CORP. A * AC
PO BOX 2760
WINSTON-SALEM 27102 919 744-3708

HAYES, HUGH HARRISON,JR. R 060
5033 GORHAM DR. A * RT
CHARLOTTE 28226

HAYES, JAMES WILLIAM ORS 001
KERNODLE CLINIC AC
BURLINGTON 27217 919 227-3621

HAYES, JOHN TERRENCE ORS 034
1342 WESTGATE CENTER DR. AC
WINSTON-SALEM 27103 919 768-3595

HAYES, MARK ALAN 032
84 LAUREL RIDGE APTS. R
HWY. 54 W. BYPASS
CHAPEL HILL 27516 919 933-6091

HAYES, RICHARD IVAN OBG 092
3320 WAKE FOREST RD. A AC
RALEIGH 27609 919 876-8225

HAYES, THOMAS PATRICK RO 080
229 MOCKSVILLE AVE. A C
SALISBURY 28144 704 636-6432
FAX 704 636-6434

HAYES, WILLIAM CLAYTON GP 097
P. O. BOX 540 A RT
WILKESBORO 28697 919 838-5498

HAYES, WILLIAM CLAYTON, JR. PD 036
825 MAJESTIC CT., STE. B AC
GASTONIA 28054 704 864-5437

HAYES, WILLIAM JAMES 000
100 BLYTHE BLVD. R
CAROLINAS MED. CTR.
CHARLOTTE 28209 704 355-2000

HAYGOOD, VANESSA PEARLINE OBG 041
721 GREEN VALLEY RD., STE 101 AC
GREENSBORO 27408 919 292-7010

HAYNES, CARL LEWIS, JR. EM 054
PO BOX 1636 A P * AC
KINSTON 28501 919 522-7171

HAYNES, LAWRENCE BOWMAN AN 092
1205 KERSHAW DR. A * AC
RALEIGH 27609 919 782-2009

HAYWARD, JAMES NEIL N 032
UNC,751 CLINICAL SCI. BLDG. A AC
CHAPEL HILL 27599 919 966-2526

HAYWOOD, HUBERT BENBURY, III ID 092
3320 WAKE FOREST RD. AC
PO BOX 18700
RALEIGH 27609 919 872-4850

HAYWOOD, HUBERT BENBURY,JR. OPH 092
2109 BANBURY ROAD A L/RT
RALEIGH 27608 919 782-0236

HAZLEHURST, JOHN LIVINGSTON GS 011
16 MCDOWELL STREET A AC
ASHEVILLE 28801 704 252-3366

HAZZARD, SUSAN L. 032
805 JACKSON ST. S
DURHAM 27701 919 688-1182

HAZZARD, WM. RUSSELL IM 034
300 S. HAWTHORNE RD. A AC
DEPT. OF MEDICINE
WINSTON-SALEM 27103 919 748-4305

HEAD, CHARLES M. GYN 067
304 AUGUSTA CT. A AC
NEW BERN 28562 919 455-6282

HEADLEY, ROBERT NELSON CD /IM 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-4331

HEAFNER, MICHAEL DANIEL,SR. NS 060
1010 EDGEHILL ROAD, NORTH A P AC
CHARLOTTE 28207 704 376-1605

HEALY, PATRICK K. IM 034
250 CHARLOIS BLVD. * AC
WINSTON-SALEM 27103 919 768-4730

HEARON, BRIAN PAUL CD /IM 018
230 18TH ST. CIRCLE SE A P AC
HICKORY 28602 704 324-4804

HEATH, DIANA HEATHER OPH 032
4600 UNIVERSITY DR. APT. 1117 A R
DURHAM 27707 919 684-6611

HEATON, FREDERICK CHRISTIAN GYN 092
3809 COMPUTER DR., STE. 201 A AC
RALEIGH 27609 919 781-6200

HEBERT, MARY ELIZABETH 032
2331 CHARLOTTE ST. R
DURHAM 27705 919 684-8111

HEDGPETH, EDWARD MCGOWAN, JR. OPH 032
1110 W. MAIN STREET * AC
DURHAM 27701 919 682-9341

HEDGPETH, JOSEPH ROWLAND OBG 029
1302 LEXINGTON AVENUE A P AC
THOMASVILLE 27360 919 475-6139

HEDGPETH, WILLIAM CAREY GYN 078
P. O. BOX 1021 A L/RT
LUMBERTON 28358

HEDRICK, HOLLY LEE 032
910 CONSTITUTION DR. APT. 804 S
DURHAM 27705 919 383-1708

HEDRICK, RICHARD ELI GS 034
1999 GEORGIA AVE. A L/RT
WINSTON-SALEM 27104 919 724-5454

HEDRICK, RICHARD ELI, JR. OBG 034
1806 S. HAWTHORNE RD. #102 AC
WINSTON-SALEM 27103 919 768-3632

HEDRICK, WILLIAM WESTON FP 092
1805 NEW HOPE RD. A * AC
RALEIGH 27604 919 231-6215

HEFFINGTON, MARK WILLIAM FP 050
P. O. BOX 510 AC
CASHIERS 28717 704 743-2491

HEGDE, SADANANDA B. CD /IM 078
4384 FAYETTEVILLE RD. A AC
LUMBERTON 28358 919 738-1141

HEINIG, CHARLES FREDERICK ORS /GS 060
BOX 91 RT
WARE NECK, VA 23178

HEIZER, MORTIMER DANTZLER FP 074
701 N. MAIN STREET AC
FARMVILLE 27828 919 753-3193

HEIZER, WILLIAM DAVID IM /GE 032
UNC, DEPT. OF MEDICINE AC
CHAPEL HILL 27599 919 966-2511

HEJAZI, MASOUD P /CHP 041
600 PASTEUR DR., STE. B A AC
GREENSBORO 27403 919 299-0886

HELAK, JOSEPH WALTER CD /IM 065
6408 WESTPORT DR. AC
WILMINGTON 28409 919 341-3400
FAX 919 541-3419

HELLER, JOEL HARVEY FP 041
603 DOLLY MADISON AC
GREENSBORO 27410 919 294-6190

HELLREICH, MARK A. PUD 011
30 CHOCTAW ST. A AC
ASHEVILLE 28801 704 255-7733

HELMRICH, GEORGE ARTHUR 060
4225 DARWIN CIRCLE R
CHARLOTTE 28209 704 355-3153

HELMS, JEFFERSON BIVENS, JR. IM /CD 034
1405 PLAZA DRIVE AC
WINSTON-SALEM 27103 919 765-4131

HELMS, VAN EDWARD EM 078
2504 ROWLAND AVE. AC
LUMBERTON 28358 919 671-5032

HELPPIE, JOANNE E. IM 045
708-D FLEMING A P AC
HENDERSONVILLE 28739 704 693-6566

HELSABECK, BELMONT AUGUSTUS OPH 034
631 COLISEUM DRIVE A L/RT
WINSTON-SALEM 27106 919 723-1041

HELSABECK, ERIC HAIGLER EM /FP 076
1301 BREVARD DR. AC
ASHEBORO 27203 919 625-5151

HELTON, WILLIAM CHARLES CDS /TS 092
3020 NEW BERN AVE. #560 AC
RALEIGH 27610 919 231-6333

HELWIG, JANE TIMBERLAKE 032
PO BOX 3720 A S
CHAPEL HILL 27515 919 929-3616

HEM, HALVOR W., IV 032
174 SUMMERWALK CIR. S
CHAPEL HILL 27514 919 968-0360

HEMBREE, EUGENE EDWARD, JR. OBG 036
1225 E. GARRISON BLVD. A AC
GASTONIA 28054 704 865-7417

HEMINGWAY, GEORGE CAPERS,JR. IM /PD 033
101 CLINIC DRIVE A AC
TARBORO 27886 919 823-2105

HEMMERLEIN, ARTHUR HANS EM /FP 092
9300 KIRKHILL DR. A AC
RALEIGH 27615 919 755-3100

HENDEL, ROBERT CHARLES GS 088
MEDICAL PARK DR., BLDG #1 AC
BREVARD 28712 704 884-2198

HENDERSON, AMY SMITH 032
100 IVY COURT R
CHAPEL HILL 27516 919 932-9090

HENDERSON, ANDREW MCKNITT, JR. GP 049
252 W. MCLELLAND AVENUE A L
MOORESVILLE 28115 704 664-5477

HENDERSON, ANITA FP 041
1016-A PROFESSIONAL VILLAGE AC
GREENSBORO 27401 919 275-6445

HENDERSON, CATHY LYNN 074
DOCTORS PARK APTS. #L-14 A S
GREENVILLE 27834 919 758-2124

HENDERSON, DAVID ANTHONY 034
1701 W. FIRST ST. #1 A S
WINSTON-SALEM 27104 919 724-7760

HENDERSON, DAVID YEARDLEY OBG 092
3126 BLUE RIDGE RD. A AC
RALEIGH 27612 919 782-0363

HENDERSON, GEORGE P.,JR. HNS /OTO 063
PINEHURST SURGICAL CLINIC A P AC
PINEHURST 28374 919 295-0242

HENDERSON, JOHN ARTHUR GS 011
117 RATHFARNHAM CIRCLE AC
ASHEVILLE 28803 704 254-2341

HENDERSON, JOHN PERCY, JR. U 054
1701 SABRA DR. A L/RT
KINSTON 28501 919 527-3043

HENDERSON, REX ARTHUR EM 011
36 WEMBLEY ROAD A AC
ASHEVILLE 28804 704 255-3786

HENDERSON, RICHARD C. ORS 032
UNC, 237 BURNETT-WOMACK AC
DIV. OF ORS, 229H
CHAPEL HILL 27599 919 966-3691

HENDERSON, RICHARD ROBERT D 001
1522 VAUGHN ROAD A AC
BURLINGTON 27217 919 227-0496

HENDRA, JILL LYNNE P 060
7401 DELTA LANE A AC
CHARLOTTE 28215 704 358-2700

HENDRICKS, ANDREW ADAM D 078
102 WEST 27TH STREET A AC
LUMBERTON 28358 919 738-7154

HENDRICKS, WILLIAM MONROE D /A 076
407 S. COX ST. A * AC
ASHEBORO 27203 919 625-8410

HENDRIX, ARTHUR M., JR. EM 060
PO BOX 1238 AC
DAVIDSON 28036 704 892-4353

HENDRIX, JOHN DAVID D 074
1705 W. SIXTH STREET AC
GREENVILLE 27834 919 752-4124

HENGEVELD, LOFTUS, JR. EM /AN 074
107 IRON WOOD DRIVE A RT
GREENVILLE 27834 919 756-2047

HENKE, ELIZABETH CD 032
CENTRAL MEDICAL PK, BLDG 700 AC
DURHAM 27704 919 471-0509

HENLEY, DOUGLAS EUGENE FP 026
1806 PUGH ST. * AC
FAYETTEVILLE 28305 919 424-0123
FAX 919 484-0345

HENLEY, JOHN T., JR. OTO 026
3314 MELROSE RD., STE. 100 A AC
FAYETTEVILLE 28304 919 323-1463

HENLEY, NANCY S. IM 032
3116 N. DUKE ST. * AC
DURHAM 27704 919 479-6300

HENLEY, THOMAS FRANKLIN OBG 041
510 N. ELAM AVE., STE. 101 A AC
GREENSBORO 27403 919 854-8800

HENNESSEN, JOHN A. ORS /ADM 063
PO BOX 1650 * AC
PINEHURST 28374 919 295-4130

HENNESSY, ROBIN JOAN PS 060
1900 RANDOLPH RD., STE. 502 AC
CHARLOTTE 28207 704 867-5852

HENNINGER, JOSEPH BAYLOR IM 049
P. O. BOX 1808 AC
STATESVILLE 28677 704 873-7789

HENRICHS, W. DEAN D /DMP 034
250 CHARLOIS BLVD. AC
WINSTON-SALEM 27103 919 768-6221

HENRICK, WILLIAM ROBERT AN /CC 092
RALEIGH ANES. ASSOCIATES A AC
P. O. BOX 18139
RALEIGH 27619 919 781-7420

HENRY, GARY WAYNE FP 004
520 W. MAIN ST. AC
MARSHVILLE 28103 704 624-3388

HENRY, HECTOR HIMEL, II U /PD 013
102 LAKE CONCORD ROAD, N.E. A AC
CONCORD 28025 704 786-5133

HENRY, OZMER LUCAS, JR. IM 011
117 DEER LAKE DR. A AC
ASHEVILLE 28803 704 669-3117

HENSCHEN, GARY MAYES P /PYA 041
606 WALTER REED DR. A AC
GREENSBORO 27403 919 299-0108

HENSEL, WILLIAM ARTHUR FP 041
1125 N. CHURCH ST. A AC
GREENSBORO 27401 919 379-4035
FAX 919 379-3078

HENSON, JOSEPH BASCOM, JR. IM 041
1107 W. FRIENDLY AVENUE L/RT
GREENSBORO 27401 919 274-1567

HENTZ, SUZANNE K. OBG 065
5305-J WRIGHTSVILLE AVE. AC
WILMINGTON 28401 919 799-2168

HEPLER, JOHN DAVIS OBG 078
403 WEST 27TH STREET A AC
LUMBERTON 28358 919 739-2846

HERAVI, CYRUS GS 003
302 HOSPITAL ROAD A AC
SPARTA 28675 919 372-4343

HERBERT, WILLIAM, N.P. OBG /NPM 032
CB #7570,214 MACNIDER BLDG. A * AC
UNC DEPT. OF OBG
CHAPEL HILL 27599 919 966-1601

HERBST, CHARLES ARTHUR, JR GS /CRS 032
UNC, CB 7210 A AC
DIV. OF GENERAL SURGERY
CHAPEL HILL 27599 919 966-5231
FAX 919 966-2898

HERINGTON, DAVID S. FP 012
2203 S. STERLING ST., STE. 193 AC
MORGANTON 28655 704 438-8171

HERION, JOHN CARROLL HEM /IM 032
N. C. MEMORIAL HOSPITAL AC
CHAPEL HILL 27599 919 966-4555
FAX 919 966-2346

HERION, JOHN M. NEP /IM 065
2215 YAUPON DR. A AC
WILMINGTON 28401 919 343-0664

HERMAN, DENNICE HICKMAN FP 014
401 MULBERRY ST., STE. 200 AC
LENOIR 28645 704 754-0707

HERNANDEZ, JAVIER 032
700 MORREENE RD. APT. J-10 S
DURHAM 27705 919 383-8765

HERNANDEZ, LUIS NICHOLAS AN 000
PO BOX 1533 A AC
SLIDELL, LA 70459

HERNDON, WM. M., JR. CD 060
1718 E. FOURTH ST., STE. 501 AC
CHARLOTTE 28204 704 347-2024
FAX 704 347-2011

HERRING, CHARLES LEONIDAS IM 054
310 GLENWOOD AVENUE * AC
KINSTON 28501 919 523-0026
FAX 919 523-1855

HERRING, JOHN HARVARD OBG 084
1000 N. FIFTH STREET A AC
ALBEMARLE 28001 704 982-8112

HERRING, RUFUS MCPHAIL, JR. PD 082
403 FAIRVIEW STREET AC
CLINTON 28328 919 592-6011

HERRING, THEODORE TILGHMAN OM /GP 098
105 RIDLEY RD. L/RT
WILSON 27893

HERRING, WILLIAM ARTHUR, JR. ORS 095
30 DOCTOR'S PARK AC
BOONE 28607 704 264-1100

HERRING, WILLIAM BENJAMIN IM /HEM 041
1200 N. ELM ST. AC
GREENSBORO 27401 919 379-4062

HERRINGTON, ROBERT THOMAS PD /PDC 032
N. C. MEMORIAL HOSPITAL AC
CHAPEL HILL 27599 919 966-4601

HERRMAN, KIMBERLY COLLINS 034
2841-C TULLEY SQUARE A S
WINSTON-SALEM 27106 919 722-4069

HERSHEY, CHARLES DANA, JR. AN 060
8820 WINGED BOURNE A P AC
CHARLOTTE 28210 704 554-0239

HERSHNER, GREGORY S. 000
491 BILTMORE AVE. R
ASHEVILLE 28801 704 258-0670

HERTLE, XAVER FRANZ P 041
106 E. NORTHWOOD STREET A AC
GREENSBORO 27401 919 275-1614

HERTZBERG, BARBARA S. DR 032
BOX 3808, DUMC A AC
DURHAM 27710 919 684-2711

HERTZBERG, MICHAEL A. 032
4 VANDORA PLACE R
DURHAM 27705 919 684-8111

HESS, MARK ROLAND EM 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4625

HESS, PHILIP JOSEPH CDS /TS 060
1001 BLYTHE BLVD. #300 A AC
CHARLOTTE 28203 704 373-1500

HESS, SUZANNE POWELL D /IM 034
6725 BRAMBLEBUSH CT. A R
CLEMMONS 27012 919 748-2968

HESTER, DAVID ALAN END /IM 011
445 BILTMORE CENTER, STE. 302 AC
ASHEVILLE 28801 704 253-6812

HEUSER, MARK DAVID IM /GER 034
BOX 154, 300 S. HAWTHORNE RD. A R
WINSTON-SALEM 27103 919 748-2390

HEYDER, ALBRECHT MARK IM /PUD 070
1142 N. ROAD ST. C
ELIZABETH CITY 27909 919 331-1506

HEYMAN, ALBERT N /IM 032
BOX 3203, DUMC L
DURHAM 27710 919 684-2682

HEYMANN, ROBERT CURTIS D 034
118 FORSYTH MEDICAL PARK AC
WINSTON-SALEM 27103 919 765-1841

HEYNEKER, THEODORE JOHAN AN 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4498

HIATT, JOHN DONALD, JR. DR 041
909 WINTERLOCHEN DR. A AC
GREENSBORO 27410 919 855-7707

HICKEY, DOCIA ELIZABETH NPM /PD 060
CAROLINAS MEDICAL CENTER A AC
PO BOX 32861
CHARLOTTE 28232 704 355-3156

HICKLING, WILLIAM HENRY CHN /N 041
1305 W. WENDOVER AVE. A AC
GREENSBORO 27408 919 275-0779

HICKMAN, HARRY STUART PD 014
426 NORWOOD ST. SW A L
LENOIR 28645 704 728-8484

HICKS, ANNA LAURIE PD 032
2116 WILSON ST. AC
DURHAM 27705 919 490-8706

HICKS, CHARLES HENRY CD 092
3324 SIX FORKS RD. A AC
RALEIGH 27609 919 781-7772
FAX 919 787-6331

HICKS, CHARLES MONTGOMERY PD 065
1914 GLEN MEADE ROAD AC
WILMINGTON 28403 919 762-2651

HICKS, J. ROBINSON ORS 060
2600 E. 7TH ST. A AC
CHARLOTTE 28204 704 372-9820

HICKS, MELISSA M. FP 011
491 BILTMORE AVE. AC
ASHEVILLE 28801 704 258-0635

HIDALGO, HECTOR JESUS DR 032
2609 N. DUKE ST. A AC
DURHAM 27704 919 471-8411

HIESTAND, FITZ GERALD, JR. GE /IM 060
1350 S. KINGS DRIVE AC
CHARLOTTE 28207 704 372-8250

HIGGINBOTHAM, MICHAEL BARRIE CD 032
BOX 31219, DUMC AC
DURHAM 27710 919 681-2919

HIGGINS, LLOYD MALCOLM PTH 040
221 HILLCREST DRIVE AC
HIGH POINT 27262 919 883-7047

HIGGINS, ROBERT VICTOR GO 060
1901 BRUNSWICK AVE. A AC
CHARLOTTE 28207 704 343-3400

HIGH, LARRY ALLISON FP 064
213 N. COLLINS ST. L/RT
NASHVILLE 27856 919 459-2432

HIGH, LARRY ALLISON, JR. OBG 064
132 FOY DRIVE A AC
ROCKY MOUNT 27801 919 443-6622

HIGHLEY, FRANK SHAPLEY P 060
427 S. SHARON AMITY RD. #B A AC
CHARLOTTE 28211 704 362-0866

HIGHSMITH, CHARLES GS /ORS 062
P. O. BOX D A L/RT
TROY 27371 919 576-5511

HIGHSMITH, GEORGE PERRY IM 029
309 PINEYWOOD ROAD A AC
THOMASVILLE 27360 919 475-8121

HIGHTOWER-HUGHES, BERNADETTE M 034
360 GLENDARE DR. #G A S
WINSTON-SALEM 27104 919 765-5133

HIGHTOWER, FELDA GS /TS 034
1244 ARBOR RD. #233 A P L/RT
WINSTON-SALEM 27104 919 727-1661

HIGHTSHUE, DAVID CLAYTON OBG 060
5970 FAIRVIEW RD., STE. 100 AC
CHARLOTTE 28210 704 551-4232

HILL, ARTHUR THEODORE, JR. IM 011
147 ASHLAND AVENUE A AC
ASHEVILLE 28801 704 258-1188
FAX 704 251-1801

HILL, EDWARD FELDIN FP 007
501 W. 15TH ST. AC
WASHINGTON 27889 919 975-2667

HILL, HAYWOOD NORTHROP, JR. IM 011
445-BILTMORE CTR., STE. 407 A AC
ASHEVILLE 28801 704 258-0397

HILL, JAMES CARVER FP /EM 092
1316 YUBINARANDA AC
CARY 27511 919 469-9635

HILL, PATRICIA KAYE P 049
PO BOX 821 A AC
STATESVILLE 28677 704 873-8446

HILL, PAUL EDWARD IM /FP 045
559 N. JUSTICE STREET A AC
HENDERSONVILLE 28739 704 692-0587

HILL, SAMUEL CRAWFORD, IV 074
M-4 DOCTOR'S PARK A S
GREENVILLE 27834 919 830-9389

HILL, STEPHEN THOMAS OBG 011
143 ASHELAND AVE. AC
ASHEVILLE 28801 704 258-9191

HILL, WILLIAM HENRY GP 084
124 E. NORTH ST. A L
ALBEMARLE 28001 704 982-5812

HILLER, CARL JULIEN ORS 025
P. O. DRAWER 1694 A AC
NEW BERN 28560 919 633-3256

HILLSMAN, PHILIP LEE 032
5505 REVERE RD. A R
DURHAM 27713 919 684-3812

HILZ, MARK DAVID EM 010
111 MULLETT AC
HOLDEN BEACH 28462 919 754-8121

HINDES, STEPHEN ROBERT D. 032
501 JONES FERRY RD. #BB4 S
CARRBORO 27510 919 968-3475

HINDS, SPENCER WALTON IM /CD 032
CB #7075 R
UNC SCH. OF MEDICINE
CHAPEL HILL 27599 919 966-5203
FAX 919 966-6923

HINES, BENJAMIN G. U 074
#2 DOCTOR'S PARK A AC
GREENVILLE 27834 919 752-5077

HINES, EDWARD LLOYD ORS /HS 001
723 EDITH STREET AC
BURLINGTON 27215 919 227-4256

HINES, MICHAEL HERBERT GS 034
723 FENIMORE ST. A R
WINSTON-SALEM 27103 919 777-0226

HINMAN, ALANSON PD /N 034
1244 ARBOR RD. #426 L/RT
WINSTON-SALEM 27104 919 723-0458

HINMAN, HAVILAH EDWARD OBG 011
7 RATHFARNUM RD. A L/RT
ASHEVILLE 28803 704 684-6243

HINN, ALBERT RICHARD 032
1000 SMITH LEVEL RD., APT. T-3 R
CARRBORO 27510 919 966-2526

HINSHAW, HOWARD THOMAS END /DIA0 060
1350 S. KINGS DRIVE AC
CHARLOTTE 28207 704 372-8750
FAX 704 332-7020

HINSON, JAMES NOAH IM 080
102 MOCKSVILLE AVE., STE. 204 AC
SALISBURY 28144 704 633-3136

HINSON, THOMAS R., JR. PUD /IM 034
3001 LYNDHURST AVE. A AC
WINSTON-SALEM 27103 919 765-0383

HINTON, JEFFREY TAYLOR OBG 024
BALDWIN WOODS GYNECOLOGY AC
WHITEVILLE 28472 919 642-3294

HIPP, EDWARD REGINALD, JR. GS /TS 060
1901 QUEENS RD. L/RT
CHARLOTTE 28207 704 372-8750

HIPP, STEPHEN WALKER NS 060
PRESBYTERIAN MEDICAL TOWER A AC
1718 E. 4TH ST., #901
CHARLOTTE 28204 704 372-8860

HIRSCH, STEVEN HAROLD IM 032
2609 N. DUKE ST. STE. 205 A AC
DURHAM 27704 919 220-5264

HITTEL, GLENN PAUL FP 078
4112 VANN DR. A AC
LUMBERTON 28358 919 628-6711

HOBART, FRANK ADAMS 074
M-4 DOCTORS PARK APT. A S
GREENVILLE 27834 919 830-9389

HOBART, SETH GUILFORD, JR. HNS /MFS 032
1024 W. FOREST HILLS L/RT
DURHAM 27707 919 479-4100

HOBLER, KIRTLAND EDWARD GS 092
5401 HUNTER HOLLOW DR. AC
RALEIGH 27606 919 881-5529

HOBSON, JACK BROWN IM /HEM 060
125 BALDWIN AVE. A AC
CHARLOTTE 28204 704 374-1696

HODGE, RONA ELSBERTH 032
9414 BALES AVE. R
KANSAS CITY, MO 64132 816 765-7429

HODGES, HORACE HAYDEN IM /GE 060
17224 DUE WEST DR. L/RT
CHARLOTTE 28278 704 588-0828

HODGES, JAMES ROBINSON FP 018
210 13TH AVENUE PLACE, N.W. A AC
HICKORY 28601 704 328-2941

HODGES, JAMES THOMAS ORS 001
GRAHAM-HOPEDALE ROAD AC
BURLINGTON 27217 919 227-3621

HODGES, MICHAEL CARSON 034
6855 S.W. 45TH LANE, #10 A S
MIAMI, FL 33155

HODGINS, LEWIS ROGER AN 032
33 LANSGATE COURT A C
DURHAM 27713 919 544-2781

HODGSON, JOHN D. IM 024
PO BOX 1249 AC
WHITEVILLE 28472 919 642-0331

HOEKSTRA, JOHN ARTHUR IM /AI 078
395 W. 27TH STREET A AC
LUMBERTON 28358 919 739-7551

HOELLERICH, VINCENT L. AN /CCM 092
PO BOX 18139 A AC
RALEIGH 27619 919 783-3034
FAX 919 781-7465

HOEPER, EDWIN W. P 096
713 SIMMONS ST. A AC
PO BOX 11389
GOLDSBORO 27530 919 736-4722

HOFFMAN, BYRON JAY, JR. IM 019
421 N. HOLLY AVENUE * AC
SILER CITY 27344 919 663-3360

HOFFMAN, CARL MAURICE OBG 040
307 N. LINDSAY STREET A * AC
HIGH POINT 27262 919 885-0149

HOFFMAN, CARL WHITE R 078
209 W. 27TH ST. A P AC
PO DRAWER 1527
LUMBERTON 28358 919 739-9788

HOFFMAN, CHARLES ANTHONY, JR. U 026
513 OWEN DRIVE A * AC
FAYETTEVILLE 28304 919 485-8801

HOFFMAN, EDNA TERESA MAURA ADM 026
404 VALLEY RD. P * AC
FAYETTEVILLE 28305 919 485-4755

HOFFMAN, ERIC D. 032
BOX 2747, DUMC S
DURHAM 27710 919 383-1448

HOFFMAN, JEFFREY DALE 060
1121 S. KINGS DR. R
CHARLOTTE 28207 704 332-7600

HOFFMAN, JUDITH L. P 011
38 WESTCHESTER DR. A AC
ASHEVILLE 28803 704 254-3201

HOFFMAN, LEROY G., JR. TR /PD 092
PO BOX 10407 A AC
TRIANGLE ONCOLOGY SERVICES
RALEIGH, 27605 919 783-3018

HOFFMAN, SCOTT DAVID FP 018
4654-B HAYGOOD RD. AC
VIRGINIA BEACH, VA 23455

HOFFMAN, TED F., JR. AN 043
819 ORANGE HIGH SCHOOL RD. AC
HILLSBOROUGH 27278 919 470-6180

HOGGARD, WILLIAM ALDEN, JR. FP 070
PO BOX 726 L
110 S. POOL ST.
ELIZABETH CITY 27909 919 335-0867

HOGGE, LEWIS HERBERT, JR. AN 032
910 CONSTITUTION DR. #909 A R
DURHAM 27705 919 681-2498

HOGSHEAD, RALPH, JR. FP 012
P. O. DRAWER 690 A L/RT
MORGANTON 28655 704 437-2232

HOHNEKER, JOHN ARTHUR 032
213 OLD FOREST CREEK DR. A R
CHAPEL HILL 27514 919 942-1737

HOLBROOK, CARTER TATE, III PHO /PD 074
DEPT. OF PEDIATRICS A * AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4676

HOLBROOK, JOSEPH SAM IM /CD 063
PO BOX 2004 A L
SOUTHERN PINES 28388 704 872-1000

HOLBROOK, WILLIAM DOUGLAS P 060
34 LUVAN WAY A L/RT
DEBORDIEU COLONY
GEORGETOWN, SC 29440

HOLDERNESS, HOWARD, JR. PS /GS 041
200 E. NORTHWOOD ST., STE. 400 A AC
GREENSBORO 27401 919 275-0919
FAX 919 275-4849

HOLEVAS, JOHN GEORGE IM 060
411 BILLINGSLEY RD. #105 AC
CHARLOTTE 28211 704 333-4175

HOLLADAY, GLENN CLYDE PD 060
2711 RANDOLPH RD., STE. 301 AC
CHARLOTTE 28207 704 332-6332

HOLLAND, AMY JEANETTE 074
111 RODNEY RD. A S
GREENVILLE 27834 919 758-9933

HOLLAND, JAMES EUGENE OPH 074
2573 STANTONSBURG ROAD A AC
GREENVILLE 27834 919 752-0313

HOLLAND, JAMES P. CD 034
3073 TRENWEST DR. A AC
WINSTON-SALEM 27103 919 768-0437

HOLLAND, MICHAEL DAY IM /NEP 064
1120 MASHIE LANE AC
ROCKY MOUNT 27801 919 443-9084

HOLLAND, RICHARD M. OBG 041
721 GREEN VALLEY RD. AC
GREENSBORO 27408 919 574-2229

HOLLAND, WALTER BOWLIN OPH 049
IREDELL EYE CLINIC AC
PO BOX 591
STATESVILLE 28677 704 872-4108

HOLLEMAN, IVAN LACY, JR. PTH 034
BOWMAN GRAY, DEPT. OF PATH. A AC
WINSTON-SALEM 27103 919 748-4311

HOLLEMAN, JEREMIAH HENRY, JR. GS /VS 060
1350 S. KINGS DR. AC
CHARLOTTE 28207 704 372-8750

HOLLENBECK, JOHN IVOR GS 060
3535 RANDOLPH RD.,201-W AC
CHARLOTTE 28211 704 364-8100

HOLLENBERG, BENNETT R. DR 060
3738 ABINGDON RD. * AC
CHARLOTTE 28211 704 371-4056

HOLLINGSWORTH, WALTER C. OBG 060
1718 E. FOURTH ST., #307 AC
CHARLOTTE 28204 704 332-8103

HOLLISTER, WILLIAM GRAY P /GPM 032
2008 N. LAKESHORE DRIVE A L/RT
CHAPEL HILL 27514 919 942-2870

HOLMAN, JOSEPH R. OBG 036
1225 E. GARRISON BLVD. A AC
GASTONIA 28054 704 866-7226

HOLMES, GEORGE WASHINGTON ORS 034
4235 STONEHENGE LN. A L/RT
WINSTON-SALEM 27106 919 722-6939

HOLMES, KEITH DEAN 034
312 RIVOLI CHASE R
MACON, GA 31210

HOLMES, NORMAN ALBERT AN 060
813 SOUTHWEST DR. C
DAVIDSON 28036 704 356-1516

HOLSCHER, EDWARD CHARLES P /CHP 060
1900 RANDOLPH ROAD, SUITE 918 AC
CHARLOTTE 28207 704 333-7724

HOLT, CHARLES RICHARD GS /EM 080
17 CAMELOT RD., KINGS FOREST AC
SALISBURY 28144 704 637-7504

HOLT, ELIZABETH HOPE IM /END 032
CB 7170, MACNIDER BLDG, UNC R
CHAPEL HILL 27599 919 966-3338

HOLT, JAMES BEATTY FP 019
RT. #6, BOX 7 AC
PITTSBORO 27312 919 542-2731

HOLT, JOHN PLUMMER FP 011
92 CONGRESS ST. AC
ASHEVILLE 28801 704 255-8494

HOLT, THOMAS OPH /OTO 091
209 FAIRVIEW STREET A L
WARRENTON 27589 919 257-3746

HOLT, WILLIAM REUBEN, JR. CD /IM 065
1515 DOCTOR'S CIRCLE AC
WILMINGTON 28401 919 763-5182

HOLT, WINDSOR AUSTIN OBG 092
3320 WAKE FOREST RD., STE.120 AC
RALEIGH 27609 919 876-8225

HOLTER, JOHN FREDERICK IM /PUD 074
DEPT. OF MEDICINE AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4653

HOLTHUSEN, GREGORY GRANT ORS 034
SALEM ORTHOPAEDIC ASSOC. PA A AC
PO BOX 25007
WINSTON-SALEM 27114 919 768-1270

HOLTKAMP, JOHN HARRY PD 092
4505 FAIR MEADOW LANE AC
RALEIGH 27607 919 542-4564

HOLTON, WALTER LEGGETT FP 070
NORTH MAIN HIGHWAY A AC
PO BOX 1045
MANTEO 27954 919 473-3478

HOLTZCLAW, JAMES F. ORS 032
BOX 3000, DUMC R
DURHAM 27710 919 684-8111

HOMESLEY, HOWARD DAVID GYN /ON 034
DEPT. OF OBG, BOWMAN GRAY A P * AC
WINSTON-SALEM 27103 919 748-4022
FAX 919 748-6937

HONEYCUTT, LATTIE FULLER DR 092
P. O. BOX 17947 AC
RALEIGH 27619 919 954-3370

HONKANEN, FRANK A. PTH /FOP 032
BOX 3712, DUMC R
DURHAM 27710 919 684-3300

HONORE, GERARD M. 034
300 S. HAWTHORNE RD. BOX 2672 A S
WINSTON-SALEM 27103 919 727-0522

HOOD, CHRISTOPHER KENNEDY GYN 060
1712 E. FOURTH STREET AC
CHARLOTTE 28204 704 375-9074

HOOD, DAVID DEAN AN 034
1658 S. MARBLEHEAD RD. A AC
CLEMMONS 27012 919 760-5259

HOOKER, MICHAEL PHILLIP AN 011
202 DOCTORS BLDG. A AC
ASHEVILLE 28801 704 254-1969

HOOLE, AXALLA JOHN IM 032
DIV.OF GENERAL MEDICINE AC
CB 7110, 5039 OLD CLINIC, UNC
CHAPEL HILL 27599 919 966-2276

HOOPER, JOSEPH WARD, JR. U 065
2216 GILLETTE DR. L/RT
WILMINGTON 28403 919 763-6251

HOOPER, ROBERT LESLIE R 050
59 HOSPITAL RD. A AC
SYLVA 28779 704 586-7000

HOOPER, THOMAS EUGENE IM 098
INTERNAL MEDICINE ASSOCIATES AC
P. O. BOX 3188
WILSON 27893 919 243-5505

HOOTEN, JAMES PHILMON, JR. ORS 032
1838 UPPERLINE ST., APT. B A R
NEW ORLEANS, LA 70115 813 979-1559

HOOVER, DON LEO FP 018
PO BOX 10094 AC
HICKORY 28603 704 294-1116

HOPE, HAROLD PAGAN, JR. GS 060
2300 RANDOLPH ROAD AC
CHARLOTTE 28207 704 376-0327

HOPKINS, LAWRENCE DAVID OBG 034
5105 RIVER CHASE RIDGE AC
WINSTON-SALEM 27104 919 722-9590

HOPKINS, MARBRY BENJAMIN, III PTH /BLB 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-2624

HOPKINS, RICHARD GLENN GP 045
PO BOX 770, WALKER ST. A AC
COLUMBUS 28722 704 894-8266

HOPPER, WILLIAM FALCON PUD /IM 041
520 N. ELAM AVE. AC
GREENSBORO 27403 919 547-1700
FAX 919 547-1717

HORNBAKE, EARL RODNEY, III IM /GER 025
FARM LIFE AVE. A * AC
VANCEBORO 28586 919 244-1785
FAX 919 244-2876

HORNER, DONALD STANLEY OBG /PD 060
431 N. WENDOVER RD. AC
CHARLOTTE 28211 704 366-8400
FAX 704 366-8732

HORNER, JACK CHENOWTH GS 061
37 PACES WEST PLACE A L/RT
ATLANTA, GA 30327 404 237-4651

HORSLEY, WILLIAM NOLEN FP 036
PO BOX 725 L
BELMONT 28012 704 825-5376

HORTON, JAMES MARVIN ID 060
1350 S. KINGS DR. AC
CHARLOTTE 28207 704 372-8750

HORTON, ROBERT MARSHALL FP 092
3124 BLUE RIDGE RD. AC
RALEIGH 27612 919 782-2333

HORVATH, LAURA JEAN DR 032
2609 N. DUKE ST. AC
DURHAM RADIOLOGY ASSOC.
DURHAM 27704 919 471-8411

HORWITZ, JAMES LAWRENCE 034
800 BRENT ST. A R
WINSTON-SALEM 27103 919 748-3254

HOSEA, ROBERT HAYWOOD OTO /HNS 054
KINSTON CLINIC, SUITE K A AC
KINSTON 28501 919 523-0687

HOSKINS, JOHN ROBINSON, III AN 011
7 AMHERST RD. A L/RT
ASHEVILLE 28803 704 274-5049

HOSSEINIAN, HAHMOOD AN 060
PO BOX 36351 A AC
CHARLOTTE 28236 704 377-5772

HOSTETLER, HERBERT JAMES AN 063
PO BOX 730 AC
WEST END 27376 919 295-4606

HOUGH, MAC JOHNSON OPH 060
3234 PARK ROAD L/RT
CHARLOTTE 28209 704 364-9354

HOUGH, WILLIAM AMOS, III IM 034
410 AVALON ROAD AC
WINSTON-SALEM 27104 919 768-4730

HOUSER, FOREST MELVILLE GP 036
410 S. ELM STREET A L/RT
CHERRYVILLE 28021 704 435-6803

HOUSTON, FRANK MATT D 041
1030 PROFESSIONAL VILLAGE A AC
GREENSBORO 27401 919 373-1383

HOWARD, GAYLE CHARLYNE 032
311 S. LASALLE ST. A S
DURHAM 27705 919 382-2530

HOWARD, GEORGE ALBERT, III DR 067
299 DOCTORS DR. A P AC
JACKSONVILLE 28546 919 577-1171

HOWARD, JAMES FRANCIS, JR. N 032
UNC,751 CLINICAL SCI. CB #7025 A AC
CHAPEL HILL 27599 919 966-5522

HOWARD, JOSEPH COOPER, JR. GS 082
403 COHARIE DR. L/RT
CLINTON 28328 919 592-3388

HOWARD, KEVIN PRICE FP 079
520 VAN BUREN RD. A AC
EDEN 27288 919 623-5171

HOWARD, KIRK A. AN 065
2505 S. 17TH ST., STE. 102 C
WILMINGTON 28401 919 343-7697

HOWARD, PAUL OSMON FP 053
555 CARTHAGE STREET A AC
SANFORD 27330 919 774-6518

HOWE, DONALD DOUGLAS OBG 036
1225 E. GARRISON BLVD. A AC
GASTONIA 28054 704 865-7416

HOWE, HAROLD RAGAN, JR. CDS /TS 060
301 HAWTHORNE LN. A AC
CHARLOTTE 28204 704 375-8413
FAX 704 332-4602

HOWELL, CHARLES MAITLAND, JR. D 034
340 PERSHING AVENUE A * L
WINSTON-SALEM 27103 919 725-8422

HOWELL, EDGAR VASTON, JR. ORS 077
400 E. WASHINGTON ST. A AC
PO BOX 1148
ROCKINGHAM 28379 919 997-4570

HOWELL, FREDERICK LAWRENCE U 034
2932 LYNDHURST AVENUE AC
WINSTON-SALEM 27103 919 765-4021

HOWELL, HARRY SLADE, JR. GS /VS 040
624 QUAKER LANE, SUITE 116-B A * AC
HIGH POINT 27262 919 886-4552

HOWELL, HOWARD SCOTT IM 045
510 W. 7TH AVENUE A C
HENDERSONVILLE 28739 704 692-2231

HOWELL, JULIUS PS /OTO 034
1900 S. HAWTHORNE RD. STE. 480 A L
WINSTON-SALEM 27103 919 760-1727

HOWELL, KATHLEEN COULING IM 045
510 7TH AVE. WEST A C
HENDERSONVILLE 28739 704 692-2232

HOWELL, LEE ELMA, JR. FP 070
17 PALMETTO LANE AC
KITTY HAWK 27949 919 491-8177

HOWELL, NELSON NEIL OTO /HNS 060
3535 RANDOLPH RD., STE. 210 * AC
CHARLOTTE 28211 704 365-0711
FAX 704 366-3562

HOWELL, TEMPLE SHARITA 074
140 CONCORD DR., APT. #8 A S
GREENVILLE 27834 919 355-1656

HOWERTON, PHILIP THOMAS R 012
201 E. PARKER RD. A AC
MORGANTON 28655 704 433-1235
FAX 704 433-1992

HOWIE, JOHN SANDALL PYA /P 092
3129 ESSEX CIRCLE A AC
RALEIGH 27608 919 782-0616

HOWILER, WILLIAM EDWARD, JR. GE 026
1778 METROMEDICAL DRIVE AC
FAYETTEVILLE 28304 919 323-5203

HOXWORTH, BENJAMIN T. GS 041
1014 PROF. VILLAGE AC
GREENSBORO 27401 919 373-1078

HUANG, ANDREW TA-FU IM /HEM 032
BOX 3942, DUMC AC
DURHAM 27710 919 684-3127

HUBBARD, HAMPTON U 082
WOODSIDE PROF. BLDG. A AC
CLINTON 28328 919 592-7129

HUBBARD, LAURA MILES 034
BOX 261, 300 S. HAWTHORNE RD. S
WINSTON-SALEM 27103

HUBBARD, ROBERT THOMAS FP 011
GIVENS ESTATES A L/RT
100 WESLEY DR., UNIT 507
ASHEVILLE 28803 704 274-7651

HUBBARD, WILLIAM COLVIN PD 092
4905 PROFESSIONAL COURT AC
RALEIGH 27609 919 872-0250

HUBBELL, DAVID DONALD PM 041
5050 CAMERON FOREST PK AC
ALPHARETTA, GA 30201

HUCKS-FOLLISS, ANTHONY GEORGE NS 063
P. O. BOX 2000 A AC
PINEHURST 28374 919 295-0226
FAX 919 295-0238

HUDSON, ANITA MARIA 074
20-B COURTNEY SQUARE S
GREENVILLE 27858 919 355-3265

HUDSON, EDWARD VALENTINE OTO 032
PO BOX 15249 A P AC
3901 ROXBORO RD.
DURHAM 27704 919 479-4100

HUDSON, RICHARD PAGE, JR. FOP /PTH 074
205 W. CHURCH ST. A AC
FARMVILLE 27828 919 753-7128

HUDSON, RICHARD WOODARD FP 025
PO BOX 729 A AC
PAMLICO MEDICAL CTR. PA
BAYBORO 28515 919 745-3191

HUDSON, SARAH TILTON WILLCOX PD 070
1142 N. ROAD ST. AC
ELIZABETH CITY 27909 919 353-6262

HUDSON, WILLIAM PAUL, II 034
1426 GLADE ST., APT. #4 S
WINSTON-SALEM 27103 919 777-1393

HUDSON, WILLIAM RUCKER OTO 032
DUKE UNIV. MED. CTR. A AC
DURHAM 27710 919 684-3834

HUDSPETH, ALLEN SHERRILL GS /TS 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4359

HUDSPETH, DUDLEY ALLEN 034
834 CAROLINA AVE. A R
WINSTON-SALEM 27101 919 748-2011

HUEHOLT, THERESE MARIE P 032
NC MEMORIAL HOSP-PSYCH. R
CHAPEL HILL 27599 919 481-1875

HUESGEN, CHRISTOPHER T. S 032
2010 PERSHING ST
DURHAM 27705 919-286-5823

HUEY, THOMAS WALKER, JR. GYN 060
1012 KINGS DRIVE L/RT
CHARLOTTE 28207 704 375-4216

HUFF, JANICE ELIZABETH FP 060
7920 MOORES CHAPEL RD. AC
CHARLOTTE 28214 704 392-1847

HUFF, OLSON PD 011
THOM'S REHAB. HOSP. A * AC
PO BOX 15025
ASHEVILLE 28813 704 274-2400

HUFFINES, WILLIAM DAVIS PTH /GP 032
UNC, CB 7520 A AC
BERRYHILL HALL
CHAPEL HILL 27599 919 966-1134

HUFFMAN, ALLAN DAY GS /VS 045
561 FLEMING ST. A AC
HENDERSONVILLE 28739 704 693-1778

HUFFMAN, ALLEN WILLIAM, JR. OBG 018
1205 N. CENTER STREET A AC
HICKORY 28601 704 328-2901

HUFFMAN, ROBERT EDWARD P 011
146 VICTORIA ROAD AC
ASHEVILLE 28801 704 253-3695

HUFFMON, GEO. VANBUREN,III 074
407 S. LEE ST. A S
AYDEN 28513 919 758-7604

HUFFSTUTTER, WILLIAM MAURICE CHN /N 011
6 BROOKLET ST. A AC
ASHEVILLE 28801 704 252-8983

HUGGINS, HENRY L., JR. EM 018
550 11TH AVE. PL. NW AC
HICKORY 28601 704 322-0850

HUGGINS, MARGARET CLAY OBG 060
2711 RANDOLPH RD., STE. 512 AC
CHARLOTTE 28207 704 333-4104

HUGGINS, MICHAEL B. GS /VS 018
RT. #2, BOX 190 AC
CONOVER 28613 704 322-9105

HUGHES, C. ANTHONY 074
120-A HUNTINGRIDGE RD. A S
GREENVILLE 27834 919 752-6434

HUGHES, CARLISLE BEE, JR. GS 086
RT. 2, BOX 567 A L/RT
YADKINVILLE 27055 919 679-8285

HUGHES, DOREEN L. 034
664 N. SPRING ST. #4 A R
WINSTON-SALEM 27101 919 748-2011

HUGHES, JACK U 032
30 KIMBERLY DR. A * L/RT
DURHAM 27707 919 489-9504

HUGHES, JAMES LEWIS PD 074
DEPT. OF PEDIATRICS A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 355-2460

HUGHES, JOE DON OBG 081
P. O. BOX 1208 A AC
RUTHERFORDTON 28139 704 287-7383
FAX 704 287-8020

HUGHES, LIND KATHRYN 000
1601-B OWEN DR., FAHEC A R
FAYETTEVILLE 28304 919 323-1152

HUGHES, LYNN ALLEN OTO 013
11 ARDSLEY AVE. A P * AC
CONCORD 28025 704 788-1103
FAX 704 786-1414

HUGHES, RONALD EUGENE FP /OM 064
PO BOX 760 AC
WHITAKERS 27891 919 437-2171

HUGHES, WM. HENRY U /EM 060
304 LILLINGTON AVE. AC
CHARLOTTE 28204 704 331-0846

HULKA, JAROSLAV FABIAN OBG 032
UNC, DEPT. OF OB-GYN P AC
CHAPEL HILL 27599 919 966-5287

HULL, DIANA MILLER 032
300 WOODCROFT PKWY. #32B R
DURHAM 27713 919 684-1046

HULL, JANE RENEE 034
2369-A QUEEN ST. A S
WINSTON-SALEM 27103 919 724-9268

HULL, KEITH LOWELL, JR. N /IM 092
PO BOX 40999 A P AC
RALEIGH 27629 919 782-3456

HUMPHREY, JOHN EDWARD, JR. P 060
2040 RANDOLPH RD. AC
CHARLOTTE 28207 704 334-0875

HUMPHRIES, C. THOMAS AI /PD39 060
411 BILLINGSLEY RD. #104 AC
CHARLOTTE 28211

HUMPHRIES, DAVID SCOTT ORS 060
1350 S. KINGS DRIVE AC
CHARLOTTE 28207 704 342-8000
FAX 704 332-7020

HUMPHRIES, RALEIGH G. U 041
1025 PROFESSIONAL VILLAGE A AC
GREENSBORO 27401 919 272-3962

HUNDLEY, JAMES DAVENPORT ORS 065
2001 S. 17TH STREET P * AC
WILMINGTON 28401 919 763-7344

HUNSBERGER, KURT LEE IM 070
1142 N. ROAD STREET A AC
ELIZABETH CITY 27909 919 338-4117

HUNSTAD, JOSEPH P. PS /HS 060
101 W. T. HARRIS BLVD. #A422 A AC
CHARLOTTE 28213 704 549-8793
FAX 704 547-8470

HUNT, OLIVER RAYMOND, JR. CDS /TS 065
1607 DOCTOR'S CIRCLE AC
WILMINGTON 28401 919 763-6571

HUNT, RICHARD CHARLES EM 074
ECU SCHOOL OF MEDICINE A AC
DEPT. OF EMERGENCY MED.
GREENVILLE 27858 919 551-2961

HUNT, THOMAS HOLMES DR /NR 034
3155 MAPLEWOOD AVENUE A AC
WINSTON-SALEM 27103 919 760-5949

HUNT, WILLIAM BRYCE, JR. PUD /IM 025
P. O. BOX 2157 A * AC
NEW BERN 28560 919 633-8608

HUNT, WILLIAM JACK IM 040
1605 HEATHGATE PL. L
HIGH POINT 27262 919 882-9814

HUNTER, CHARLES E., JR. CDS /TS 065
1912 TRADD CT. A P AC
WILMINGTON 28401 919 762-7070
FAX 919 343-9559

HUNTER, DAVID MONTGOMERY 034
1828 ELIZABETH AVE. A C
WINSTON-SALEM 27103 919 748-4991

HUNTER, JAMES EDWARD IM /CD 029
309 PINEYWOOD RD. A AC
THOMASVILLE 27360 919 475-8121

HUNTER, JENNIFER LYNN 032
311 S. LASALLE ST. #24F A S
DURHAM 27705

HUNTER, JOHN BALDWIN GS /GP 023
618 E. MARION STREET A L/RT
SHELBY 28150 704 487-6022

HUNTER, JOHN DANE ON /HEM 065
1202 MEDICAL CENTER DRIVE A AC
WILMINGTON 28403 919 762-2990
FAX 919 341-3419

HUNTER, JOHN GRAY GS /CRS 041
41 FOUNTAIN MANOR DR. #D A L/RT
GREENSBORO 27405 919 274-7998

HUNTER, ROBERT MERRILL CDS /TS 092
3020 NEW BERN AVE. #560 AC
RALEIGH 27610 919 231-6333

HUNTLEY, DANNY EDWARD FP 060
6708 ALBEMARLE RD. AC
CHARLOTTE 28212 704 536-4903

HUNTLEY, ROBERT ROSS FP 032
PO BOX 190 AS
CHAPEL HILL 27514 919 942-7210

HURDLE, THOMAS GRAY U 026
1786 METROMEDICAL DR. L
FAYETTEVILLE 28304 919 485-8151

HURRELBRINK, LESTER E., III GE /IM 040
624 QUAKER LN., STE. C-103 A P AC
HIGH POINT 27262 919 885-8159

HURST, DANIEL JOHNSON PUD /IM 034
250 CHARLOIS BLVD. AC
WINSTON-SALEM 27103 919 768-4730

HURST, DAVID MAURICE R /NM 029
1003 PINE NEEDLE LANE A AC
THOMASVILLE 27360 919 475-3056

HURT, JOE PAUL PTH /NA 050
163 MONTEITH BRANCH ROAD A AC
SYLVA 28779 704 586-7131

HURWITZ, BARRIE J. N /IM 032
BOX 3184, DUMC AC
DURHAM 27710 919 684-4126

HUSSEY, HOWARD SUMMERELL, JR. FP 033
908 ST. ANDREW STREET A L/RT
TARBORO 27886 919 823-2534

HUSSEY, MICHAEL BRUSH NS 040
P. O. BOX 5388 A AC
HIGH POINT 27262 919 889-3242

HUTCHESON, JAMES STERLING AI 060
2711 RANDOLPH RD. BLDG. 400 AC
CHARLOTTE 28207 704 372-7900

HUTCHINS, CHARLES HUBERT FPS /OTO 036
750 COX ROAD A AC
GASTONIA 28054 704 867-7212

HUTCHINS, KENNETH RAYMOND U 060
1350 S. KINGS DRIVE AC
CHARLOTTE 28207 704 372-8750

HUTCHINSON, FORNEY, III ORS /HS 060
1001 BLYTHE BLVD., #200 A P AC
CHARLOTTE 28203 704 373-0544

HUTH, JAMES FRANK GS 032
3010 OLD CLINIC BLDG. CB #7210 A AC
UNC SCHOOL OF MEDICINE
CHAPEL HILL 27599 919 966-5221

HUTTO, EDITH D 011
E-11 WOODFIELD RT
ASHEVILLE 28803 704 298-2954

HUTZENBUHLER, ANGELA NOEL IM 032
2920 CHAPEL HILL RD. #26B R
DURHAM 27707 919 684-8111

HWANG, LORIS Y. 034
235 CORONA ST., APT. 204 S
WINSTON-SALEM 27103 919 722-5309

HWANG, YINNAN GARY FP 092
PO BOX 425 A AC
ZEBULON 27597 919 269-4101

HYDE, AUSTIN TABER, JR. A /IM 081
BOX 189 AC
JONAS RIDGE 28641 704 286-9036

HYLTON, JOEL WALTER PD 029
200 ARTHUR DR. AC
THOMASVILLE 27360 919 475-2348

IBRAHIM, KAISSAR SLEIMEN GS /CDS 051
712 WILKINS STREET AC
SMITHFIELD 27577 919 934-2360

IBRAHIM, MOUNIR LABIB P /HYP 034
1400 MILLGATE DR. STE. A A AC
WINSTON-SALEM 27103 919 768-2886

IGLEHART, JAMES DIRK GS /TS 032
BOX 3873, DUMC A AC
DURHAM 27710 919 684-6133

IMBODEN, LEY INEZ 074
217 E. WOODSTOCK DR. S
GREENVILLE 27834 919 756-8735

IMBUS, HAROLD ROGER OM 041
420 GALLIMORE DAIRY RD. A AC
GREENSBORO 27409 919 665-1818

INABNET, WILLIAM BARLOW OTO /PSF 041
100 E. NORTHWOOD STREET AC
GREENSBORO 27401 919 275-0507

INGE, JACK RANSOM, II 074
N-5 DOCTOR'S PARK APTS. * S
GREENVILLE 27834 919 830-1738

INGE, WELLFORD W., III AN 000
1402 CHAMPIONS PINES LANE A R
AUGUSTA, GA 30909 404 791-7057

INGLEFIELD, JOSEPH T., III AI /PDA 018
RT. #3, BOX 330 A AC
HICKORY 28602 704 465-7248

INGRAM, CHARLES HAL GS 040
229 CASCADE DR. L/RT
HIGH POINT 27260 919 886-4552

INGRAM, HAYWOOD MELTON GS 041
1317 N. ELM ST., STE. #5 A * AC
P. O. BOX 10037
GREENSBORO 27401 919 274-8444

INGRAM, ROBERT GREGORY IM 035
BUNN MEDICAL CENTER A C
PO BOX 368
BUNN 27509 919 496-6511

INJEJIKIAN, JIRAIR ALEXAN TS /GS 023
709 GROVER STREET A AC
SHELBY 28150 704 482-8371

†INMAN, CHARLES ERNEST FP 078
PO BOX 788 A
DECEASED--10-4-90
FAIRMONT 28340 919 628-7188

IPAPO, VIRGILIO SORIANO GS /VS 090
1309 E. FRANKLIN ST. P AC
MONROE 28112 704 289-3024

IRANI, WALEED NABIL 032
1213-H N. MEADOW CREEK CIR. S
IRVING, TX 75038

IRIGARAY, PETER JOSEPH P 032
JOHN UMSTEAD HOSPITAL A P AC
BUTNER 27509 919 575-7233

IRONS, CARY FREDERICK, JR. FP 074
1104 W. ROCK SPRING ROAD A L/RT
GREENVILLE 27834 919 752-3423

IRONS, GEORGE VERNON, JR. CD /IM 060
1718 E. 4TH ST., #501 A AC
CHARLOTTE 28204 704 343-9800
FAX 704 347-2011

IRONS, MALENE GRANT PD /GPM 074
1104 W. ROCK SPRING ROAD A L/RT
GREENVILLE 27834 919 752-3423

IRONS, THOMAS GRANT PD 074
ECU SCHOOL OF MEDICINE A AC
OFFICE OF THE DEAN-AD37
GREENVILLE 27858 919 551-2983
FAX 919 551-3192

IRVING, RICHARD CARROLL AN /GER 045
355 ORCHARD CIR. A L/RT
HENDERSONVILLE 28739 704 692-9806

ISAACS, KIM LUISE IM /GE 032
103 POLK'S TRAIL R
CHAPEL HILL 27514 919 968-1597

ISBEY, EDWARD K., III OPH 011
495 BILTMORE AVE. A P AC
ASHEVILLE 28801 704 258-1586
FAX 704 258-1765

ISBEY, EDWARD KENNETH, JR. OPH 011
495 BILTMORE AVENUE A P AC
ASHEVILLE 28801 704 258-1586

ISENHOWER, JOSEPH ANDREW FP 018
24 SECOND AVENUE, N.E. A AC
HICKORY 28601 704 328-2231

ISKANDER, NIVEEN YOUSSEF 074
3336 LANDMARK ST. H-3 A S
GREENVILLE 27834 919 355-3248

ISRAEL, JAMES RAY P 034
1365 WESTGATE CENTER DR. P AC
SUITE N-1
WINSTON-SALEM 27103 919 760-3220

ISRAEL, JOHN ROBERT PS 011
5 LIVINGSTON STREET AC
ASHEVILLE 28801 704 253-7000

ISSA, MAHMOUD A. GE /IM 067
224 MEMORIAL DR. STE. A AC
JACKSONVILLE 28540 919 577-1444

IWAOKA, ROBERT S. IM /CD 060
1718 E. 4TH ST., #501 AC
CHARLOTTE 28204 704 347-2024

IZLAR, HENRY LEROY, JR. IM /CD 032
PO BOX 16999 L/RT
4205 BEN FRANKLIN BLVD.
DURHAM 27704 919 682-5562

IZURIETA, HENRY IM 026
514 BEAUMONT ROAD AC
FAYETTEVILLE 28304 919 485-8831

JABEN, SCOTT LEONARD OPH 060
309 S. LAUREL AVE. A AC
CHARLOTTE 28207 704 372-4380
FAX 704 358-0624

JACKLIN, HAROLD NORMAN OPH 041
1014 N. ELM STREET A P AC
GREENSBORO 27401 919 274-2149

JACKSON, CHARLES THOMAS OBG 060
5970 FAIRVIEW RD. #5950 AC
CHARLOTTE 28210 704 551-4200

JACKSON, DAVID BRADLEY 034
438-C S. HAWTHORNE RD. S
WINSTON-SALEM 27103 919 723-5253

JACKSON, DAVID DEWITT GS /CDS 086
P. O. BOX 191 A AC
MOUNT AIRY 27030 919 789-9176

JACKSON, DAVID STONE, JR. FP 034
300 S. HAWTHORNE ROAD A AC
WINSTON-SALEM 27103 919 748-2832
FAX 919 748-4204

JACKSON, DON VERNON, JR. IM /ON 011
ONE DOCTORS DR. A AC
ASHEVILLE 28801 919 748-2088

JACKSON, DONALD CHARLES R 025
P. O. BOX 2065 AC
NEW BERN 28560 919 633-5057

JACKSON, FREEMAN RANDOLPH R 041
107 ELMWOOD TERRACE * AC
GREENSBORO 27408 919 299-6815

JACKSON, JAMES ROBERT NS 025
2713 NEUSE BLVD. AC
NEW BERN 28560 919 633-6070

JACKSON, JOSEPH ALEXANDER, III OPH 080
800 W. CEMETERY STREET A AC
SALISBURY 28144 704 633-0345

JACKSON, LINDA HALL P /CHP 011
PO BOX 1101 A AC
HIGHLAND HOSPITAL
ASHEVILLE 28802 704 254-3201

JACKSON, MURRAY THREADGILL,JR. R 050
P. O. BOX 1043 A AC
SYLVA 28779 704 586-7120

JACKSON, RICHARD DEWITT GS 086
1067 GREENHILL ROAD A L/RT
MOUNT AIRY 27030 919 786-2400

JACKSON, ROBERT B., II OBG 095
207 LONGVUE AC
BOONE 28605 704 262-9696

JACKSON, STALEY THOMAS ORS 023
608 W. KING ST. C
KINGS MOUNTAIN 28086 704 734-0199

JACOBS, GEORGE DANIEL OBG 036
1225 E. GARRISON BLVD. A P AC
GASTONIA 28054 704 865-7416
FAX 704 865-7232

JACOBS, JAMES CURTIS OBG 040
307 N. LINDSAY ST. A AC
HIGH POINT 27262

JACOBS, WILLIAM EDWARD PS /GS 060
2215 RANDOLPH ROAD A AC
CHARLOTTE 28207 704 372-6846
FAX 704 342-0752

JACOBSON, ERIC WILLIAM IM /RHU 092
3831 MERTON DR. AC
RALEIGH 27609 919 781-9633

JACOBSON, PETER LARS N /IM 063
P. O. BOX 1749 A AC
PINEHURST 28374 919 295-6868

JACOBSON, ROBERT CARL AN 092
P. O. BOX 18139 A AC
RALEIGH 27619 919 783-3034

JACOBSON, SEVERT HAROLD NS 063
P. O. BOX 2000 A AC
PINEHURST 28374 919 295-1291

JACQUES, ROBERT SAMUEL EM /FP 063
P. O. BOX 695 A AC
PITTSBORO 27312 919 295-7777

JACUMIN, WALTER JOE R /NM 012
PO BOX 265 A AC
RUTHERFORD COLLEGE 28671 704 879-9541
FAX 704 874-1992

JAEKLE, RONALD KENNETH OBG 034
300 S. HAWTHORNE RD. R
DEPT. OF OB/GYN
WINSTON-SALEM 27103 919 748-4615

JAFFE, GLENN JAY OPH 032
BOX 3802, DUKE UNIV. EYE CTR. A * AC
DURHAM 27701 919 684-4458
FAX 919 684-2230

JAFFURS, WILLIAM J., JR. EM 065
5301 WRIGHTSVILLE AVE. AC
WILMINGTON 28403

JAGODA, FRANK SAMUEL DR 011
PO BOX 2959 A AC
ASHEVILLE 28802 704 254-4617

JAIN, REKHA IM /PD 092
2411 E. MILLBROOK RD. STE. 111 AC
RALEIGH 27604 919 878-8620

JAMES, CHARLES GREENE IM 060
700 E. STONEWALL ST., STE. 130 A AC
CHARLOTTE 28202 704 377-2188

JAMES, CHARLES NEWTON FP 081
P. O. BOX 518 AC
CAROLEEN 28019 704 657-5371

JAMES, FRANCIS MARSHALL,III AN 034
15 GRAYLYN PLACE LANE A AC
WINSTON-SALEM 27106 919 723-4690

JAMES, GEORGE W. D 034
1020 WELLINGTON RD. L
WINSTON-SALEM 27106 919 723-9716

JAMES, J. FRANK P 074
DEPT. OF PSYCHIATRY A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2668

JAMES, JOHN CLAY FP 018
ROUTE #3, BOX 436 AC
MAIDEN 28650 704 428-9740

JAMES, JOSEPH MCCRAW R 065
2622 MIMOSA PLACE A AC
WILMINGTON 28403 919 343-7069

JAMES, PAUL ARTHUR FP 074
PO BOX 549 A AC
BETHEL 27812 919 825-0355

JAMES, RICHARD THOMAS, JR. IM 060
217 TRAVIS AVENUE A L/RT
CHARLOTTE 28204 704 372-3350

JAMES, ROBERT MITCHELL FP 000
1137 S. MAIN ST. A R
GRAHAM 27253 919 227-0170

JAMES, ROGER ALLEN FP 011
946 TUNNEL ROAD A AC
ASHEVILLE 28805 704 298-7981

JAMISON, EDGAR LAMONT OPH /OTO 076
1243 IDLEWOOD RD. A L/RT
ASHEBORO 27203 919 625-6315

JANEWAY, RICHARD N 034
300 S. HAWTHORNE RD. A AC
BOWMAN GRAY SCH. OF MED.
WINSTON-SALEM 27103 919 748-4424

JANICKI, PETER T. OTO /HNS 032
DUMC, DIV. OF OTO, BOX 3805 A R
DURHAM 27710 919 684-8111

JANOSKO, EDWARD ORESTES, II U /N/A 074
#2 DOCTORS PARK A AC
GREENVILLE 27834 919 752-5077

JANOWSKY, DAVID S. P 032
UNC, DEPT. OF PSYCHIATRY AC
231 MEDICAL SCH. WING B 207H
CHAPEL HILL 27599 919 966-4738

JARMAN, FONTAINE GRAHAM, JR. GS 042
12 LONGSTREET ROAD A L/RT
WELDON 27890 919 536-2884

JARMAN, WAYNE THOMAS GS 049
1726-B DAVIE AVE. A AC
STATESVILLE 28677 704 873-1024

JARMAN, WILLIAM HENRY, JR. ORS 036
902 COX RD., STE. A A AC
GASTONIA 28054 704 865-6487

JAROSAK, PETER JAMES PD 041
1307 W. WENDOVER AVE. AC
GREENSBORO 27408 919 275-6335

JAROW, JONATHAN P. U 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4131

JARRAH, AZMI SHAFIQ PD /PNP 012
100 MEDICAL HTS. AC
MORGANTON 28655 704 433-4484

JARRAHI, ALI P /PH 034
2830 MAPLEWOOD AVENUE AC
WINSTON-SALEM 27103 919 768-2424

JARRELL, JOHN ARTHUR, JR. AN 032
2924 BUCKINGHAM RD. A RT
DURHAM 27707 919 684-2368

JARRELL, WILBURN ERIC FP 086
2007 SALEM ROAD AC
MOUNT AIRY 27030 919 786-5050

JARRETT, DAVID LINCOLN ORS 011
53 S. FRENCH BROAD ST. A AC
ASHEVILLE 28801 704 252-7180

JARRETT, THOMAS EDWARD IM 040
624 QUAKER LANE, #205A A AC
HIGH POINT 27262 919 841-6711

JARVIS, BENNIE LEA OTO 064
2420 PROFESSIUONAL DR. AC
PO BOX 7099
ROCKY MOUNT 27804 919 937-4100
FAX 919 937-0571

JARVIS, JAMES LUTHER NM /R 036
1516 PINEOLA LANE L/RT
GASTONIA 28054 704 865-8679

JASKI, THOMAS JOHN GE /IM 081
RUTHERFORD INTERNAL MED. ASSOC AC
PO BOX 390
RUTHERFORDTON 28139 704 286-9036

JASMINE, MARK S. ORS 013
PO BOX 1606 A AC
CONCORD 28026 704 788-3155
FAX 704 788-3487

JAVAID, MOHAMMAD IQBAL U 079
515 THOMPSON ST., STE. C AC
EDEN 27288 919 623-8451

JECK, LIDA MORAWETZ P 032
800 EASTOWNE DR., STE. 204 AC
CHAPEL HILL 27514 919 493-5329

JEFFERS, ROBERT GORDON PD /ADL 092
3803-A COMPUTER DR. AC
RALEIGH 27609 919 782-5273

JEFFRIES, LYDIA M. 011
150 CHEROKEE RD. A AC
ASHEVILLE 28801 919 684-8111

JEMSEK, JOSEPH GREGORY ID /IM 060
1350 S. KINGS DR. AC
CHARLOTTE 28207 704 372-8750

JENISON, MARK 032
129 TALL OAKS RD. S
CHAPEL HILL 27516 919 933-9917

JENKINS, ALBERT MILTON R 092
3614 HAWORTH DR. A AC
RALEIGH 27609 919 832-8080

JENKINS, JOSEPH MCKENDRIE U 007
210 RIVERSIDE DR. A AC
WASHINGTON 27889 919 946-9045
FAX 919 323-9857

JENKINS, LARRY PARKER OPH 084
121 YADKIN STREET AC
ALBEMARLE 28001 704 983-1102

JENKINS, SAMUEL GATLIN, JR. GS 070
1142 N. ROAD STREET A AC
ELIZABETH CITY 27909 919 335-4890

JENKINS, STANLEIGH EDWARD, JR. FP 008
501 HAYES STREET AC
AHOSKIE 27910 919 357-1226

JENKINS, WANDA LOUISE OBG 013
211 LEPHILLIP COURT A AC
CONCORD 28025 704 786-1115

JENNER, PAUL WM. CLP /BLB 060
2425 PARK RD. AC
PO BOX 36507
CHARLOTTE 28203 704 376-1661

JENNETTE, ALBERT TYSON ORS 098
1700 S. TARBORO ST. A AC
WILSON 27893 919 291-1300

JENNINGS, JEROME EDWIN ORS 034
410 FORSYTH MEDICAL PK A AC
WINSTON-SALEM 27103 919 765-1571

JENNINGS, JOHN CHRISTOPHER OBG 034
300 S. HAWTHORNE RD. A * AC
WINSTON-SALEM 27103 919 748-4595

JENNINGS, JOHN LEE, JR. D 096
BOX 1399, 1100 E. ASH ST. A AC
GOLDSBORO 27533 919 734-0944

JENNINGS, ROBERT BURGESS PTH /CLP 032
BOX 3712, DUMC A AC
DURHAM 27710 919 684-3528
FAX 919 684-4352

JENNINGS, ROYAL GREEN D 040
624 QUAKER LANE, SUITE 302-B A * AC
HIGH POINT 27262 919 887-3195

JENSEN, KIRK BRADLEY EM 064
1105 ROYAL RIDGE DR. A AC
ROCKY MOUNT 27804 919 443-8172

JENSEN, ROGER D. FP 011
640 MERRIMON AVE. AC
ASHEVILLE 28804 704 258-0670

JEON, MYUNG KIL GP 007
MEDICAL ARTS CENTER AC
PLYMOUTH 27962 919 793-5073

JEREMIAH, MICHAEL PATRICK 060
9143 KINGS CANYON DR. A R
CHARLOTTE 28210 704 355-2456

JESSUP, PAMELA KAY H. FP 053
555 CARTHAGE ST. A AC
SANFORD 27330 919 774-6518

JESTER, KIMBERLY BUCHANAN 074
9 BRANCHS ESTATES MH PARK A S
BRANCHES ESTATES, 10-B
GREENVILLE 27858 919 355-0961

JETT, HARRIMAN HARDING GS 060
2104 RANDOLPH ROAD AC
CHARLOTTE 28207 704 377-3900
FAX 704 377-1244

JEWELL, GARY WELCH GYN 090
1408 FRANKLIN STREET AC
MONROE 28110 704 289-2553

JEWELL, KATHLEEN T. GPM 065
601 S. COLLEGE RD. A AC
WILMINGTON 28403 919 395-3280

JIAMACHELLO, NICHOLAS OBG 026
307 SYLVAN ROAD A RT
FAYETTEVILLE 28305 919 485-8729

JILCOTT, RUPERT WADSWORTH, III IM 054
KINSTON CLINIC NORTH, STE. H A AC
KINSTON 28501 919 522-1404

JIMENEZ, ANDREA MERCEDES 032
RT. 11, #6 RIFFEL WOODS R
CHAPEL HILL 27516 919 966-4339

JOBE, ANN CONNOR FP 074
DEPT. OF FAMILY MEDICINE A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2278

JOBE, DANIEL BRIAN 034
3010-T WALNUT FOREST CT. A S
WINSTON-SALEM 27103 919 659-9233

JOBSON, VERNON WAKEFIELD GO /GYN 034
1901 S. HAWTHORNE RD. STE. 360 A AC
WINSTON-SALEM 27103 919 765-1464

JOHNSEN, ERIC MERRIMAN FP 084
1007 N. 6TH ST. A AC
ALBEMARLE 28001 704 983-3121

JOHNSEN, LYNN IM 026
325 N. COOL SPRING ST.,APT.504 A L/RT
FAYETTEVILLE 28301 919 484-6080

JOHNSON, ALAN MORSE TS /GS 011
257 MCDOWELL ST. A AC
ASHEVILLE 28803 704 258-1121

JOHNSON, ALBIN WILLARD OPH 092
2800 BLUE RIDGE BLVD.,STE. 409 A AC
RALEIGH 27607 919 781-7400

JOHNSON, ANDREW MYRON PD 041
1200 N. ELM ST. AC
GREENSBORO 27401 919 379-4064
FAX 919 379-3591

JOHNSON, ANN RHAMY 032
PO BOX 2395 A S
CHAPEL HILL 27515 919 968-8850

JOHNSON, ATLEE ROLLINS,III 034
2325 FAIRWAY DR. R
WINSTON-SALEM 27103 919 723-3171

JOHNSON, BARBARA ANN P 032
4408 AMERICAN DR. A R
DURHAM 27705 919 383-9806

JOHNSON, BETTY HULL AN 065
1907 HAWTHORNE RD. AC
WILMINGTON 28403 919 343-2486

JOHNSON, CHARLES ROSS P 092
4000 BLUE RIDGE RD. STE. 100 AC
RALEIGH 27612 919 781-8539

JOHNSON, CHARLES THOMAS, JR. FP 078
222 S. MAIN ST. AC
PO BOX 232
RED SPRINGS 28377 919 843-4576

JOHNSON, CHERYL MARIE 032
4800 UNIVERSITY DR. APT. 3M S
DURHAM 27707 919 490-4988

JOHNSON, DAVID SANDER PD 001
530 W. WEBB AVENUE AC
BURLINGTON 27215 919 228-8316

JOHNSON, DAVID SCOTT FP 032
4408 AMERICAN DR. #B R
DURHAM 27705 919 383-9806

JOHNSON, DENNIS RAY R 074
#9 DOCTORS PARK AC
GREENVILLE 27834 919 752-5000

JOHNSON, DONALD CARL OPH 007
P. O. BOX 699 AC
WASHINGTON 27889 919 946-3111

JOHNSON, DONALD GENE R /NR 065
2212 DELANEY AVENUE A AC
WILMINGTON 28403 919 383-7070

JOHNSON, GALE DENNING GS 043
910 W. POPE ST. L/RT
DUNN 28334 919 892-7893

JOHNSON, GEORGE, JR. GS /VS 032
UNC, DEPT. OF SURGERY A AC
CB #7210
CHAPEL HILL 27599 919 966-3391
FAX 919 966-2898

JOHNSON, HEBER WELLINGTON OBG /GS 065
417 BRADLEY CREEK POINT A L/RT
WILMINGTON 28403 919 256-2040

JOHNSON, HENRY WESLEY PD 034
3175 MAPLEWOOD AVENUE A AC
WINSTON-SALEM 27103 919 768-7030

JOHNSON, HOLLY PUGH OPH 034
416 RIDGEHAVEN DR. A R
WINSTON-SALEM 27104 919 748-3504

JOHNSON, JAMES ALFRED NS 040
606 N. ELM ST. A RT
HIGH POINT 27262 919 889-8877
FAX 919 885-2060

JOHNSON, JAMES C. DR 000
14 SCHENK TERRACE A R
PITTSBURGH, PA 15215 717 275-2178

JOHNSON, JAMES ERWIN ORS 026
3308 MELROSE ROAD A P AC
FAYETTEVILLE 28304 919 484-4874

JOHNSON, JAMES NOLEN FP /EM 061
213 DEER PARK LAKE DR. A AC
SPRUCE PINE 28777 704 765-1414

JOHNSON, JOY MOORING IM 092
4612 GUNSTON PL AC
RALEIGH 27612 919 783-5312

JOHNSON, KEVIN M. DR 032
2609 N. DUKE ST. AC
DURHAM RADIOLOGY ASSOCIATES
DURHAM 27704 919 471-8411

JOHNSON, KIM EDWARD AN 064
3709 WESTRIDGE CIRCLE DR. C
ROCKY MOUNT 27801 919 443-2124

JOHNSON, LAUREN PATRICIA 032
1002 WILLOW DR. APT. #3 A S
CHAPEL HILL 27514 919 967-2590

JOHNSON, LESLIE DONALD DR 001
2728 BEDFORD ST. A AC
BURLINGTON 27215 919 570-4096

JOHNSON, MARGARET GOULD 032
9504 GREENFIELD RD. R
CHAPEL HILL 27516 919 942-4955

JOHNSON, MARTIN KAY GE /IM 041
1904 N. CHURCH ST. AC
GREENSBORO 27405 919 379-4062

JOHNSON, PAUL BERNERD FP 011
206 ASHELAND AVE. AC
ASHEVILLE 28801 704 258-8681

JOHNSON, PAUL D. OBG 011
110 W. GROVER ST. C
SHELBY 28150 704 487-5258

JOHNSON, PETER GRAHAM OM /FP 041
420 GALLIMORE DAIRY RD. A C
GREENSBORO 27409 919 282-2352

JOHNSON, RANDALL DIVAN GS /VS 011
16 MCDOWELL STREET A AC
ASHEVILLE 28801 704 252-3366

JOHNSON, ROBERT BRUCE D 092
101 CARY PKWY. SW #210 * AC
CARY DERMATOLOGY CTR.
CARY 27511 919 467-8556

JOHNSON, RONALD W. FP 011
172 ASHELAND AVE. AC
ASHEVILLE 28801 704 252-1131

JOHNSON, STEPHEN EDWARD EM /IM 092
PO BOX 229 AC
TRAVERSE CITY, MI 49684

JOHNSON, THOMAS DUANE 074
9538 W. NORTH AVE. APT. #1 S
WAUWATOSA, WI 53226

JOHNSON, THOMAS MILTON FP 051
709 NORTH STREET AC
SMITHFIELD 27577 919 934-8556

JOHNSON, TINK ASTON, III U 049
PO BOX 1821 AC
STATESVILLE 28677 704 878-2011

JOHNSON, TODD CLAYTON PM 011
PO BOX 15025 A AC
ASHEVILLE 28813 704 274-2400

JOHNSRUDE, IRWIN STANLEY DR 074
P. O. BOX 328, RTE. #9 A AC
GREENVILLE 27834 919 355-6924
FAX 919 752-0166

JOHNSTON, CAROL ANN OPH 067
264 MEMORIAL DR. AC
JACKSONVILLE 28540 919 353-1030

JOHNSTON, DAVID SOMERS ORS /SM 060
1001 BLYTHE BLVD., #200 A P AC
CHARLOTTE 28203 704 373-0544

†JOHNSTON, FRANK RANDOLPH TS /CDS 034
735 ARBOR RD. L/RT
WINSTON-SALEM 27104 919 748-4338

JOHNSTON, FRANK SMITH, JR. IM 092
3900 BROWNING PLACE AC
RALEIGH 27609 919 781-9650

JOHNSTON, HARVEY WYLIE U 060
101 W. T. HARRIS BLVD. A AC
CHARLOTTE 28262 704 547-1392

JOHNSTON, JAMES WILLIAM OBG 001
KERNODLE CLINIC L/RT
BURLINGTON 27215 919 227-3621

JOHNSTON, JOHN GARDNER PD 060
1700 ABBEY PLACE A AC
CHARLOTTE 28209 704 523-7232

JOHNSTON, WILLIAM WEBB PTH 032
BOX 3712, DUMC A P AC
DURHAM 27710 919 684-3587

JOHNSTON, WM. ELLIOTT AN 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-3613

JOHNSTONE, WILLIAM MILLER, JR. 074
1608 BEAUMONT DR. A * R
GREENVILLE 27858 919 551-4669

JOINES, JERRY DALE 032
RT. #1, BOX 131 A R
NEW HILL 27562

JOLLEY, OLIN B. 032
2015 MARKHAM DR. R
CHAPEL HILL 27514 919 966-5711

JOLLY, WILLIAM OSCAR, III FP 084
305 YADKIN ST. A AC
ALBEMARLE 28001 704 983-7900

JONES, ALBERT MCCRAY OBG 007
ROUTE #5, BOX 14 L/RT
WASHINGTON 27889 919 946-8951

JONES, ALLEN G. IM 060
101 W.T.HARRIS BLVD. STE.C-101 AC
CHARLOTTE 28213 704 547-1462

JONES, BILLY ERNEST D 074
DEPT. OF MED/DERMATOLOGY AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2555

JONES, CARL H., III FP 082
403 FAIRVIEW ST. AC
CLINTON 28328 919 592-6011

JONES, CHAMP MCMILLIAN, JR. FP 034
2805 LYNDHURST AVE. AC
WINSTON-SALEM 27103 919 768-8890

JONES, CHARLES WADE 034
2323 WESTOVER DR. S
WINSTON-SALEM 27103 919 721-0935

JONES, CHRISTOPHER 000
BROWN UNIV DEPT. OF FAM. MED. R
MEMORIAL HOSP OF RHODE ISLAND
PAWTUCKET, RI 02860 401 722-6000

JONES, CLARA ISELEY GP 001
815 S. FIFTH ST. A L/RT
MEBANE 27302 919 563-1080

JONES, CLAYTON JOE GYN 013
107 COUNTRY CLUB DRIVE A AC
CONCORD 28025 704 786-7158

JONES, COLIN DOUGLAS FP 008
ACADEMY STREET A AC
AHOSKIE 27910 919 332-6138

JONES, CONSTANCE CARPENTER FP 053
555 CARTHAGE ST. C
SANFORD 27330 919 774-6518

JONES, CRAIG S. GS 023
4051 GULFSHORE BLVD. N'PH-205 A L
NAPLES, FL 33940 813 261-5609

JONES, DAVID CRAVEN FP 001
202 S. FIFTH STREET AC
MEBANE 27302 919 563-9341

JONES, DAVID HERMAN OPH 092
900 CEDARHURST DR. A RT
RALEIGH 27609 919 876-2618

JONES, DAVID MARSHALL NS 018
415 N. CENTER ST., STE. 203 A AC
HICKORY 28601 704 327-9740

JONES, DAVID RAY 074
602 SHADOWOOD DR. R
JACKSONVILLE 28540 919 758-1841

JONES, DENNIS EBLEN DARNELL OBG 074
DEPT. OF OB-GYN AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4610

JONES, DONNIE HUE, JR. GP 051
P. O. BOX 158 L
PRINCETON 27569 919 936-5171

JONES, ELLEN HUFFMAN 074
1410 GREENBRIAR VILLAGE A S
AYDEN 28513 919 746-2245

JONES, FRANK COLLINS, JR. GS 050
KILIMANJARO MED. CTR H
THE GOOD SAMARITAN FOUNDATION
MOSHI,TANZANIA, E.AFRICA

JONES, FRANKLIN D. NS 074
2325 STANTONSBURG RD. A AC
GREENVILLE 27834 919 752-5156

JONES, FRIELDEN BERTIE, III FP 057
LAUREL MEDICAL CENTER AC
MARSHALL 28753 704 656-2611

JONES, GREGORY LEE FP 007
108 FRONT ST. AC
BELHAVEN 27810 919 238-2407

JONES, HARVEY MICHAEL PTH /CLP 091
1001 PARK AVE. AC
HENDERSON 28536 919 492-4477

JONES, J. KEMPTON FP 032
1001 S. HAMILTON ROAD A * AC
CHAPEL HILL 27514 919 968-4551

JONES, J. WESLEY GE /IM 026
1309 MEDICAL DR., STE. 102 A AC
FAYETTEVILLE 28304 919 323-2477

JONES, JAMES BUCKNER IM /PUD 060
3535 RANDOLPH ROAD A AC
CHARLOTTE 28211 704 365-0760

JONES, JAMES DAVID CHP /PD 032
BOX 3115, DUMC A AC
DURHAM 27710 919 684-2372

JONES, JAMES GRADY FP 074
PO BOX 8609 A AC
GREENVILLE 27858 919 551-2600

JONES, JAMES MARSHALL, JR. IM 034
1225 E. FIFTH STREET AC
WINSTON-SALEM 27101 919 725-7362

JONES, JEFFREY DAVID GE /IM 098
1201 BROOKSIDE DR. NW A AC
WILSON 27893 919 291-7001

JONES, JERRY ANTHONY IM /GE 060
2021 E. 7TH ST. AC
CHARLOTTE 28204 704 372-9884

JONES, JOHN IRVIN, III END /IM 032
804 CHRISTOPHER RD. R
CHAPEL HILL 27514 919 966-3336

JONES, MARY MCKEEL FP 023
421 W. MARION ST. A C
SHELBY 28150 704 484-8001

JONES, MORRIS ALEXANDER, JR. R 032
3643 N. ROXBORO ST. A AC
DURHAM 27704 919 471-3411

†JONES, NORMAN NESBETH GP /GE 041
1019 S. ENGLISH ST. A AC
GREENSBORO 27401 919 274-0097

JONES, O. HUNTER OBG 060
232 PERRIN PLACE A L/RT
CHARLOTTE 28207 704 333-0455

JONES, PATRICIA ANN 032
8 KENNEBEC DR. S
CHAPEL HILL 27514 919 929-2499

JONES, ROBERT BOYD OTO 065
2311 DELANEY ROAD A * AC
WILMINGTON 28403 919 762-8754

JONES, ROBERT S.,JR.-BOBBY FP 023
421 W. MARION ST. A * AC
SHELBY 28150 704 484-8001

JONES, ROBERT SPURGEON FP 023
113 GROVER STREET A * AC
SHELBY 28150 704 487-5228

JONES, SARA THOMPSON AN 034
321 BANBURY ROAD A AC
WINSTON-SALEM 27104 919 768-8987

JONES, STEPHEN WATSON FP 023
113 GROVER ST. A AC
SHELBY 28150 704 487-5228

JONES, THADDEUS LEROY PTH /HEM 034
3333 SILAS CREEK PARKWAY * AC
WINSTON-SALEM 27103 919 760-5840

JONES, THOMAS THWEATT GP 032
608 W. MARKHAM AVE. A L/RT
DURHAM 27701 919 489-2115

JONES, WILLIAM ROBERT GP 064
900 SUNSET AVE. AC
ROCKY MOUNT 27804 919 446-4921

JONNALAGADDA, M. RAO P /PH 074
W.B.JONES ADATC A P AC
RT. #1, BOX 20-A
GREENVILLE 27834 919 830-3426

JORDAN, BARBARA MOORE P 078
207 W. 29TH STREET AC
LUMBERTON 28358 919 738-5261

JORDAN, H. MENDALL D 092
2800 BLUE RIDGE BLVD. #302 A P AC
RALEIGH 27607 919 781-1001

JORDAN, HENRY DAVIDSON PTH 065
P. O. BOX 9000 A P AC
WILMINGTON 28402 919 343-7074

JORDAN, JOAN THEA IM 019
PO BOX 689 AC
SILER CITY 27344 919 663-3360

JORDAN, LYNDON KIRKMAN FP 051
P. O. BOX 760 A P AC
SMITHFIELD 27577 919 934-7687

JORDAN, PETER MANNING 034
2252 ELIZABETH AVE. A R
WINSTON-SALEM 27103 919 748-2011

JORDAN, RICHARD M. R 036
PO BOX 1495 A AC
GASTONIA 28053 704 864-4378

JORDAN, RILEY MOORE FP 047
303 PATTERSON ST. AC
PO BOX 669
RAEFORD 28376 919 875-5151

JORDAN, ROBERT CALHOUN, JR. R 053
P. O. BOX 1007 A P AC
SANFORD 27330 919 776-1210

JORDAN, ROBERT CHARLES OTO 034
175 CHARLOIS BLVD. STE. 101 A AC
WINSTON-SALEM 27103

JORDAN, SCOTT BREWER OBG 018
RT. #2, BOX 195 AC
CONOVER 28613 704 322-4920

JORDAN, STUART HARRINGTON OBG 026
1320 MEDICAL DR. AC
FAYETTEVILLE 28304 919 323-3301

JORDAN, WELDON HUSKE IM 026
114 BROADFOOT AVENUE A AC
FAYETTEVILLE 28305 919 484-3261

JORDAN, WILLIAM RAND U 026
2008 LITHO PLACE A AC
FAYETTEVILLE 28304 919 485-8871

JORIZZO, JOSEPH L. D 034
300 S. HAWTHORNE RD. A AC
DEPT. OF DERMATOLOGY
WINSTON-SALEM 27103 919 748-2768
FAX 919 748-4204

JOSEPH, MICHAEL C. GPM /PD 032
5716 GENESSEE DR. AC
DURHAM 27712 919 471-3278

JOSHI, VIJAY V. PTH 074
DEPT. OF CLI. PTH/DIAG. MED. A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4495

JOSLYN, ANN KATHRYN OPH 018
PO BOX 2588 AC
HICKORY 28603 704 322-2050

JOYCE, CHARLES WELDON GP 079
401 W. DECATUR ST. AC
MADISON 27025 919 548-9618

JOYCE, DONALD GEORGE ORS 060
3535 RANDOLPH ROAD, SUITE 103 A * AC
CHARLOTTE 28211 704 365-2111

JOYCE, G. WILLIAM IM/NEP 040
624 QUAKER LN., ST. 213B AC
HIGH POINT 27262 919 883-4131

JOYNER, RAYMOND EDWARD U 032
923 BROAD STREET A AC
DURHAM 27705 919 286-1297
FAX 919 286-7599

JOYNER, RONNIE STEPHEN OBG 025
801 MCCARTHY BLVD. A AC
NEW BERN 28560 919 633-3942

JOYNER, SAMUEL BALFOUR IM 041
510 N. ELAM AVE., STE. 201 A AC
GREENSBORO 27403 919 299-5454

JOYNER, SUSAN JANE OPH 092
3320 EXECUTIVE DR. STE. 111 A AC
RALEIGH 27609 919 876-2427

JOYNER, WALTON KITCHIN, JR. OPH 092
3900 BROWNING PLACE AC
RALEIGH 27609 919 787-2758

JOYNER, WILLIAM STAFFORD FP 032
401 WHITEHEAD CIR. * L/RT
CHAPEL HILL 27514 919 968-4551

JREISAT, KHALED F. N /CHN 025
PO BOX 2588 A AC
NEW BERN 28561 919 633-3744

JUENGEL, PAUL H., III OTO /PSF 001
1206 VAUGHN RD. A P * AC
BURLINGTON 27215 919 226-0660

JULIAN, JESSE S., JR. TS /CDS 034
PO BOX 15771 R
WINSTON-SALEM 27113 919 748-2011

JURGELSKY, WILLIAM EM 025
2000 NEUSE BLVD. AC
NEW BERN 28560 919 633-8104

JUSTIS, CHRISTOPHER MORROW AN 080
221 BETHEL DR. A AC
SALISBURY 28144 704 638-1000

JUSTIS, HOMER RODEHEAVER U 060
1012 KINGS DRIVE AC
CHARLOTTE 28283 704 334-6449

KAASA, LAURIN JUUL PTH 092
3312 LANDOR RD. A L
RALEIGH 27609 919 755-8260

KADYK, JAN MARC ORS 095
30 DOCTOR'S PARK A AC
BOONE 28607 704 264-1100

KAHL, FREDERIC ROSS CD /IM 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4261

KAHN, JOSEPH WILLIAM FP 056
P. O. BOX 147 L/RT
FRANKLIN 28734 704 524-9696

KAHN, ROBERT CHARLES GS 008
RT. #2, BOX 16-E * AC
AHOSKIE 27910 919 332-2244

KAHN, ROBERT HOWARD D 036
1072 X-RAY DR. AC
PO BOX 3598
GASTONIA 28053 704 864-8386

KALAYANAMIT, TUL 032
2 SPRING GARDEN APTS. S
CHAPEL HILL 27514 919 933-0153

KALDY, PATRICIA MARIE FP 042
104 MINA AC
ROANOKE RAPIDS 27870 919 535-4492

KALINA, KENT MICHAEL P /ALD 060
1515 MOCKINGBIRD LN., STE. 801 A AC
CHARLOTTE 28209 704 523-6872

KALLIANOS, JOHN A. IM /PD 032
400 CRUTCHFIELD ST., STE. A A C
DURHAM 27704 919 471-4484

KALLMAN, HAROLD FP /GER 074
DEPT. OF FAMILY MEDICINE A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2597

KAMERER, DONALD B., JR. OTO /HNS 060
1350 S. KINGS DR. AC
CHARLOTTE 28207 704 372-8750
FAX 704 372-8750

KAMM, RICK RANDE OBG 092
3805 COMPUTER DR. AC
RALEIGH 27609 919 781-6200
FAX 919 783-1819

KAMMIRE, GORDON C. ORS /SM 029
14 MEDICAL PARK DR. A AC
LEXINGTON 27292 919 249-2978

KAMMIRE, LESLIE DANESE OBG 034
2927 LYNDHURST AVE. A AC
WINSTON-SALEM 27103 919 765-9350

KAMP, MAURICE ARTHUR PH /GPM 060
1400 DREXEL PLACE A L/RT
CHARLOTTE 28209 704 525-3468

KANDL, LOUIS CHARLES IM /GER 084
331 N. FIRST ST. AC
ALBEMARLE 28001 704 982-2189

KANE, RICHARD DOUGLAS U 092
4301 LAKE BOONE TR.,STE. 300 A AC
WAKE UROLOGICAL
RALEIGH 27607 919 782-1255
FAX 919 782-6056

KANICH, ROBERT EMIL PTH 092
4420 LAKE BOONE TRAIL A AC
RALEIGH 27607 919 783-3057

KANOF, ELIZABETH PASCHER D 092
3400 EXECUTIVE DRIVE A P * AC
RALEIGH 27609 919 878-0310

KANTOROWSKI, PAMELA A.G. 032
2920 CHAPEL HILL RD., APT 30B A S
DURHAM 27707 919 493-9544

KAPLAN, ANDREW JON 032
531 PRINCETON WAY NE R
ATLANTA, GA 30307

KAPLAN, JEFFREY MARK R 067
ONSLOW MEMORIAL HOSPITAL P AC
P. O. BOX 1358
JACKSONVILLE 28541 919 577-2345

KAPLAN, RICHARD DAVID OBG 041
721 GREEN VALLEY RD., STE. 201 A AC
GREENSBORO 27408 919 378-1110

KAPLEY, DAVID JOSEPH 032
119 MAXWELL RD R
CHAPEL HILL 27514 919 966-2025

KAPLOWITZ, GARY L. ORS 091
RUIN CREEK ROAD A P AC
MEDICAL SERVICE BLDG.
HENDERSON 27536 919 438-3186

KAPPELMANN, RICK BERNARD OTO 032
3111 BUCKINGHAM RD. AC
DURHAM 27707 919 490-8743

KARAMALEGOS, ANTONIOS Z. U 083
521 LAUCHWOOD DR. A AC
LAURINBURG 28352 919 277-8636

KARB, KENNETH SAMUEL ON /IM 041
301 E. WENDOVER AVE., STE. 300 A AC
GREENSBORO 27401 919 272-2141

KARIM-JETHA, ZAHEER AN 078
202 EDINBOROUGH DR. AC
LUMBERTON 28358 919 738-8154

KARIS, JOANNES HUBERTUS AN 032
BOX 3094, DUMC A AC
DURHAM 27710 919 681-6944

KASH, STEPHEN LEE OPH 065
1120 MEDICAL CENTER DRIVE A AC
WILMINGTON 28401 919 763-7316

KASHTAN, HILLEL I. AN 034
1856 BARNSTABLE RD. AC
CLEMMONS 27012 919 945-9051

KASIK, LEE AN 041
215 MANCHESTER PL. AC
GREENSBORO 27410 919 299-6343

KASPAR, JOHN V. 034
1337 TREDWELL DR. A S
WINSTON-SALEM 27103 919 725-7787

KASSMAN, NEIL M. GE /IM 049
PO BOX 1821 AC
OLD MOCKSVILLE RD.
STATESVILLE 28677 704 878-2011

KASTNER, ROBERT JEFFREY FP /EM 070
48 DUCK WOODS DR. A AC
KITTY HAWK 27949 919 261-4645

KATARIA, SUDESH PD 074
DEPT. OF PEDIATRICS AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-3198

KATARIA, YASH PAL PUD /IM 074
DEPT. OF MEDICINE A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4653
FAX 919 551-2012

KATH, PHILIP DOUGLAS OPH 012
335 E. PARKER ROAD AC
MORGANTON 28655 704 433-6220

KATZ, DAVID STEWART OM /GP 045
E. I. DUPONT A AC
PO BOX 267
BREVARD 28712 704 885-5837

KATZ, JEFFREY DAVID CD /IM 041
520 N. ELAM AVE. A P AC
GREENSBORO 27403 919 547-1700

KATZ, SAMUEL LAWRENCE PD /ID 032
BOX 2925, DUMC AC
DURHAM 27710 919 684-3734
FAX 919 681-2714

KAUFFMAN, GREGORY JOHN 032
140 BEECHWOOD DR. R
CARRBORO 27510 919 933-0023

KAUFMAN, JEFFREY 032
2752 MIDDLETON AVE., APT. 30-L A S
DURHAM 27705 919 383-6848

KAUFMANN, JAMES GREGORY OPH 032
7301 CALIBRE PARK DR., #202 R
DURHAM 27707 919 966-5296

KAVANAGH, BRIAN DENNIS 032
BOX 3085, DUMC R
DURHAM 27710 919 684-3742

KAYYE, PAUL THOMAS P /CHP 092
101 BLAIR DR., ADAMS BLDG. AC
RALEIGH 27603 919 733-7640

KEAGY, BLAIR ALLEN TS /CDS 032
UNC, CB 7065 A AC
108 BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-3381
FAX 919 966-3475

KEARNEY, THOMAS RAYMOND P /ALD 067
107-A POINT EMERALD VILLAS AC
EMERALD ISLE 28557 919 455-5500

KEARNS, PAUL RUTHERFORD OBG 049
750-H HARTNESS ROAD AC
STATESVILLE 28677 704 872-6389

KEATHLEY, FRANKLIN BURR D /A 036
224 NEW HOPE ROAD A L
GASTONIA 28052 704 867-0773

KEEL, JAMES FRANKLIN, III IM /CCM 013
68 LAKE CONCORD ROAD, N.E. A AC
CONCORD 28025 704 782-3135

KEELING, J. WAYNE ORS 079
307 W. MOREHEAD STREET A AC
REIDSVILLE 27320 919 342-6116

KEENER, JOSEPH KEITH NEP /IM 092
101 DURYER COURT A AC
CARY 27511 919 782-3378

KEENER, STEPHEN ROBERT GPM /FP 060
2845 BEATTIES FORD ROAD AC
CHARLOTTE 28216 704 336-4701

KEENEY, GLENWARD THOMAS OBG 026
1219 WALTER REED ROAD A AC
FAYETTEVILLE 28304 919 323-2103

KEENEY, RONALD ERIC PD /ID 092
5 MOORE DR., GLAXO, INC. A AC
RESEARCH TRIANGLE PK 27709 919 990-5019

KEEVER, RICHARD ALAN OTO 040
624 QUAKER LN., STE. 301-D AC
HIGH POINT 27262 919 883-1366

KEIPPER, VINCENT LEE MCCALLA IM /GER 013
56 ARDSLEY AVENUE, N. E. AC
CONCORD 28025 704 782-1101

KEITH, JULIAN FAISON, JR. ALD /FP 065
5733 OAK BLUFF LN. A AC
WILMINGTON 28403 919 251-6540

KEITH, THEODORE ALLEN CD 034
3073 TRENWEST DR. A AC
WINSTON-SALEM 27103 919 768-0437
FAX 919 768-0433

KELEHER, MICHAEL FRANCIS GS 011
18 MAYWOOD ROAD A L/RT
ASHEVILLE 28804 704 254-1835

KELLAM, DONALD SWIFT, JR. ORS 060
2225 CARMEL RD. RT
CHARLOTTE 28226 704 377-0351

KELLAM, LORI GOCO 034
794 SCOTT ROAD A S
LEWISVILLE 27023 919 945-3851

KELLER, CHARLES AUGUSTUS, JR. CDS 011
257 MCDOWELL STREET A P AC
ASHEVILLE 28803 704 258-1121

KELLER, GUY OTIS GS 060
1928 RANDOLPH RD. #213 AC
CHARLOTTE 28207 704 372-6767

KELLEY, JOHN SIMPSON CD /IM 092
3324 SIX FORKS RD. A P AC
RALEIGH 27609 919 781-7772

KELLEY, THOMAS FRANCIS FP 084
460 N. 10TH ST. A L
ALBEMARLE 28001 704 982-9144

KELLEY, THOMAS FRANCIS IM /CD 060
1001 BLYTHE BLVD., STE. 300 A AC
CHARLOTTE 28203 704 373-1500

KELLING, DOUGLAS GEORGE, JR. IM /PUD 013
390 COPPERFIELD BLVD. A * AC
CONCORD 28025 704 782-3135

KELLY, DAVID L., JR. NS 034
BOWMAN GRAY-NEUROSURGERY A AC
WINSTON-SALEM 27103 919 748-4049

KELLY, JAMES REGINALD IM 032
PO BOX 16999 A AC
4205 BEN FRANKLIN BLVD.
DURHAM 27704 919 682-5561

KELLY, JEFFREY AN /EM 034
406 CLIFFDALE DR. A AC
WINSTON-SALEM 27104 919 748-2591

KELLY, JOHN B. N 034
300 S. HAWTHORNE RD. R
WINSTON-SALEM 27103 919 748-2011

KELLY, JOHN JAY FP 011
612 U. S. HIGHWAY 70 AC
SWANNANOA 28778 704 686-5232

KELLY, JOHNSON HALL U 023
1001 N. WASHINGTON ST. A AC
SHELBY 28150 704 482-2011

KELLY, LARRY WADE 032
910 CONSTITUTION DR. APT. 520 S
DURHAM 27705 919 383-9608

KELLY, LUTHER W., JR. END /NM 060
1350 S. KINGS DR. AC
CHARLOTTE 28207 704 372-8750
FAX 704 332-7020

KELLY, MICHAEL WALKER OPH 092
2500 BLUE RDIGE RD.STE.102 AC
RALEIGH 27612 919 781-2127
FAX 919 782-9131

KELLY, RICHARD BRUCE FP 011
N-1 DOCTOR'S DR. AC
ASHEVILLE 28801 704 258-0670

KELLY, ROBERT GEORGE FP 034
2805 LYNDHURST AVENUE AC
WINSTON-SALEM 27103 919 768-8890

KELLY, THOMAS A. CD 041
520 N. ELAM AVE. AC
GREENSBORO 27403 919 547-1700

KELLY, TIMOTHY GERALD OPH 065
1904 TRADD CT. A AC
WILMINGTON 28401 919 762-0057

KELLY, WILLIAM SHERWOOD FP /GER 034
280 S. BROAD ST. #B AC
KERNERSVILLE 27284 919 993-2224

KELSH, JAMES MICHAEL GS 033
101 CLINIC DRIVE A AC
TARBORO 27886 919 823-2105

KEMP, ELIZABETH ANN 060
1540 GARDEN TERR. #505 A R
CHARLOTTE 28203 919 355-3153

KEMPER, ALEX RANDALL 032
3011 PRATT AVE. #D S
DURHAM 27705 919 684-5681

KEMPNER, WALTER IM 032
1505 VIRGINIA AVE. A L/RT
DURHAM 27705 919 286-2243

KENAN, LEROY FULTON FP 092
PO BOX 99 AC
SNEADS FERRY 28468 919 782-5601

KENAN, PATRICK DAN OTO 032
DUKE, DIV. OF OTOL. A AC
DURHAM 27710 919 684-5238

KENDALL, JOHN HAROLD GP 082
715 STEWART AVENUE A L
CLINTON 28328 919 592-2161

KENDRICK, PAUL WAYNE NEP /IM 074
6 DOCTORS PARK A P AC
STANTONSBURG ROAD
GREENVILLE 27834 919 752-8880

KENNEDY, CHARLIE LEE PD 034
501 N. CLEVELAND AVE. A AC
WINSTON-SALEM 27101 919 725-0514

KENNEDY, DANIEL JOSEPH 034
2367 LYNDHURST AVE. R
WINSTON-SALEM 27103 919 748-2011

KENNEDY, THOMAS FRANCIS R 011
P. O. BOX 2959 AC
ASHEVILLE 28802 704 254-4617

KENNEDY, WILLARD LEE CD /IM 092
3324 SIX FORKS RD. A P AC
RALEIGH 27609 919 781-7772
FAX 919 787-6331

KENNERLY, ROBERT M. CDS /TS 011
445 BILTMORE CTR., STE. 103 A AC
ASHEVILLE 28801 704 258-9446

KENNY, JEAN BRYCE FELTY PD /ID 074
DEPT. OF PEDIATRICS AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2511

KENTER, KEITH ORS 032
3030 GLENDALE A R
DURHAM 27704 919 471-4704

KEPLEY, MICHAEL AVERY OBG 049
527 BROOKDALE DR. AC
STATESVILLE 28677 704 872-4499

KEPPLER, C. BURTON AN 045
334 BROOKSIDE CAMP RD. A AC
HENDERSONVILLE 28792 704 692-8688

KERAM, EMILY A. HALPERN P 032
316 SEVERIN STREET A R
CHAPEL HILL 27516 919 966-4131

KERAM, STEVAN 032
316 SEVERIN ST. A R
CHAPEL HILL 27516 919 966-5711

KERANEN, VICTOR JOSEPH NS 026
3314 MELROSE ROAD, SUITE 104 AC
FAYETTEVILLE 28304 919 484-9802

KERLEY, ROGER KENNY IM 086
917 WORTH ST. AC
PO BOX 985
MOUNT AIRY 27030 919 789-7833

KERMON, LOUIS TODD IM /CD 092
2708 PEACHTREE ST. A L/RT
RALEIGH 27608 919 782-0563

KERNER, THEODORE CHARLES,JR. DR 034
3155 MAPLEWOOD AVE. A C
WINSTON-SALEM 27103 919 765-2902

KERNODLE, CHARLES EDWARD, JR. GS 001
603 ISLEY PLACE, APT. D A L/RT
BURLINGTON 27215 919 226-4598

KERNODLE, DONALD REED OPH /OTO 001
KERNODLE CLINIC A AC
BURLINGTON 27217 919 227-3621

KERNODLE, DWIGHT TALMADGE IM 001
KERNODLE CLINIC L/RT
BURLINGTON 27217 919 227-3621

KERNODLE, GEO. WALLACE, SR. PD 001
MEDICAL CTR PHARMACY BLDG A * L
BURLINGTON 27215 919 226-7608

KERNODLE, GEORGE W., JR. RHU /IM 001
316 N. GRAHAM-HOPEDALE RD. A AC
BURLINGTON 27217 919 227-3621
FAX 919 227-6603

KERNODLE, HAROLD BARKER, JR. ORS 001
316 N. GRAHAM-HOPEDALE RD. AC
BURLINGTON 27217 919 227-3621

KERNODLE, JOHN ROBERT GYN 001
2465 EDGEWOOD AVE. A * L/RT
BURLINGTON 27215 919 584-7075

KERNS, THOMAS C., JR. 032
1110 W. MAIN ST. AC
DURHAM 27701

KERR, ROBERT MORTON GE /IM 034
BOWMAN GRAY, DEPT. OF MED. AC
WINSTON-SALEM 27103 919 748-4602

KESLER, ARCHIE DEAN, JR. OBG 053
1140 CARTHAGE ST. A AC
SANFORD 27330 919 775-2304

KESLER, JAMES L. OPH 065
1120 MEDICAL CENTER DRIVE A * AC
WILMINGTON 28401 919 763-7316

KESSEL, STEVEN R. IM 060
1350 S. KINGS DR. AC
CHARLOTTE 28207

KEY, LISA MARIE 034
707 HICKORY HIGHLANDS DR. S
ANTIOCH, TN 37013

KEYES, BOOKER T., JR. U 067
118-A MEMORIAL DR. A AC
JACKSONVILLE 28540 919 577-5161

KEYES, KENNETH SHOCKLEY OTO /HNS 034
1420 PLAZA DRIVE AC
WINSTON-SALEM 27103 919 765-4922
FAX 919 768-3072

KEYSERLING, THOMAS CHARLES IM 032
UNC,CB 7110,5039 OLD CLI.BLDG R
DIV. OF GEN. MED/CLI. EPIDEM.
CHAPEL HILL 27599 919 966-2276

KHAN, MUSHTAQ HUSSAIN GS /GP 010
ROUTE #3, BOX 23 A P * AC
SUPPLY 28462 919 754-8115

KHAWLY, JOSEPH A. 032
3804-208 CHIMNEY RIDGE PL. S
DURHAM 27713 919 490-0022

KHOSHNEVIS, PARVIZ OBG 077
PO BOX 1715 A AC
ROCKINGHAM 28379 919 997-3151

KHURI, RAJA N. NEP 074
DEPT. OF MED./RENAL MED. A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2545

KIEFFER, HENRI L.G. DR 011
103 DOCTORS BLDG. AC
PO BOX 2959
ASHEVILLE 28802 704 254-4617

KIHLSTROM, BRUCE LEE NS /GS 032
PO BOX 15249 A P AC
3901 ROXBORO RD.
DURHAM 27704 919 383-5531

KIHM, JOHN TURNER IM 032
PO BOX 16999 A AC
4205 BEN FRANKLIN BLVD.
DURHAM 27704 615 322-2333

KILBRIDE, KEVIN ANTHONY P /GP 012
BOX 114, BROUGHTON HOSPITAL AC
MORGANTON 28655 704 433-2476

KILBY, LARRY SHELTON FP /GER 097
505 13TH ST. AC
LOFLAND BLDG.
NORTH WILKESBORO 28659 919 667-3922

KILEFF, MOYRA ELEANOR AN 032
403 CLAYTON ROAD A AC
CHAPEL HILL 27514 919 470-4000

KILEY, JAMES WILLIAM OPH 092
3320 EXECUTIVE DR. A P AC
RALEIGH 27609 919 876-2427

KILGORE, WM. R., III IM /GE 032
9201 E. ELM ST. R
WICHITA, KS 67206 316 689-9177

KILLAM, ALLEN PAGE OBG /NPM 032
4044 NOTTAWAY AC
DURHAM 27707 919 684-2876

KILLIAN, JOHN HUME OPH 011
276 E. CHESTNUT STREET A AC
ASHEVILLE 28801 704 255-8978
FAX 704 251-9150

KILPATRICK, WILBUR KIRBY, JR. OBG 063
P. O. BOX 2000 A AC
PINEHURST 28374 919 295-1391

KIM, JEROME HAHN IM /ID 032
608 WINDSONG LN. R
DURHAM 27713 919 684-8111

KIM, PHILLIP BOKSOO PTH 097
WILKES GENERAL HOSPITAL AC
N. WILKESBORO 28659 919 651-8100

KIM, SARAH AI 026
1317 MEDICAL DR. STE. #3 A P AC
FAYETTEVILLE 28304 919 323-3890

KIM, TONG SU P 018
24 2ND AVE. NE A P AC
HICKORY 28601 704 324-9900

KIM, WILLIAM NO CHUN OBG /OM 026
1317 MEDICAL DR. STE. #3 A RT
FAYETTEVILLE 28304 919 323-3890

KIM, YOUNG CUE IM 092
209 W. MILLBROOK ROAD A AC
RALEIGH 27609 919 781-5933

KIMBERLY, GEORGE DOUGLAS FP 034
PO BOX 1047 AC
MOCKSVILLE 27028 704 634-1124

KIMBRELL, ODELL C., JR. IM /END 092
240 BRYAN BUILDING AC
RALEIGH 27605 919 828-6393

KIMBRO, MICHAEL KERRY 041
2786 STEPHANIE WAY R
MINDEN, NV 89423

KIMBROUGH, HOUSTON MAGILL, JR. U /GS 041
1025 PROFESSIONAL VILLAGE A AC
GREENSBORO 27401 919 272-3962

KIMMEL, DAVID PAUL IM 006
PO BOX 1565 AC
BANNER ELK 28604 704 898-5176

KINDSCHUH, PETER MICHAEL OBG 024
BALDWIN WOODS AC
WHITEVILLE 28472 919 642-3294

KING, ANNE BRYSON PD 041
721 GREEN VALLEY RD. AC
GREENSBORO 27408 919 272-9447

KING, DANA EDWIN FP 074
ECU SCHOOL OF MEDICINE A AC
FAMILY PRACTICE CENTER
GREENVILLE 27858 919 551-5505

KING, FRANCIS PARKER IM 025
210 WILSON POINT L/RT
NEW BERN 28562 919 637-5411

KING, GARLAND COFFIELD 056
39 RIVERVIEW ST. AC
FRANKLIN 28734 704 524-9595

KING, GLENDALL LEE ORS 036
902 COX ROAD, SUITE A A AC
GASTONIA 28054 704 865-6487

KING, HARRY LEE OTO /HNS 018
PO BOX 2186 A AC
HICKORY 28603 704 322-5120
FAX 704 322-1636

KING, JAMES LEROY AN 092
5420 DEER FOREST TRAIL A AC
RALEIGH 27614 919 676-0222

KING, JEFFREY MILTON AN 034
409 ROLLER MILL DR. AC
LEWISVILLE 27023 919 748-4498

KING, JOSEPH JOHN, JR. ORS 090
701 ROOSEVELT BLVD., BLDG.600 AC
MONROE 28110 704 289-4595
FAX 704 289-5829

KING, LOWELL RESTELL U /PD 032
BOX 3831, DUMC A AC
DURHAM 27710 919 684-6994
FAX 919 684-8666

KING, MICHAEL BRIAN CD /IM 054
313 AIRPORT ROAD AC
KINSTON 28501 919 522-2578

KING, MICHAEL EUSTERMAN ORS 034
3111 MAPLEWOOD AVE. STE. 104 AC
WINSTON-SALEM 27103 919 768-4110

KING, STEPHEN CURTIS 032
63 WILLOW WAY R
CHAPEL HILL 27516 919 684-3742

KING, VALERIE JEAN 032
RT. #3, BOX 338 A S
PITTSBORO 27312 919 542-2328

KING, WALTER LEE OPH 018
PO BOX 2186 A P AC
HICKORY 28603 704 322-5120

KINLAW, WM. K., JR. NS 000
370 WINN WAY A AC
DECATUR, GA 30030 404 292-4612

KINNAIRD, PAUL MCKEE, JR. PD 064
101 NASH MEDICAL ARTS MALL AC
ROCKY MOUNT 27804 919 937-7979

KINNEY, ROBERT BRUCE PTH 013
1419 DENNBRIAR DR. AC
CONCORD 28025 704 788-5987

KINNEY, STEPHEN LEIGH FP 000
4312 BEDROCK CIR. #102 A AC
BALTIMORE, MD 21236 301 931-4884

KIRBY, SAMUEL CRAIG D 040
624 QUAKER LN.,STE. 302,BLDG.B A AC
HIGH POINT 27262 919 887-3195

KIRK, CHARLES DAYTON AN 092
RALEIGH ANESTHESIA ASSOC. A AC
P. O. BOX 18139
RALEIGH 27619 919 781-7420

KIRKLAND, JOHN A., JR. 034
1416 JEREMY LANE A C
ROCKY MOUNT 27803 919 748-4131

KIRKLAND, JOHN ALVIN OBG 098
CAROLINA CLINIC AC
WILSON 27893 919 291-9010

KIRKLAND, MIRIAN L. H. IM 000
971 RIDGEVIEW AVE. A R
WINSTON-SALEM 27127 919 379-3900

KIRKLAND, STEPHEN M. CD /IM 034
3073 TRENWEST DR. A AC
WINSTON-SALEM 27103 919 768-0437

KIRKLEY, MARGARET ANNE FP 045
518 SIXTH AVENUE, WEST AC
HENDERSONVILLE 28739 704 697-7805

KIRKLEY, SIDNEY EUGENE IM 045
518 SIXTH AVENUE, WEST A * AC
HENDERSONVILLE 28739 704 697-7805

KIRKMAN, PAUL MADISON CD /IM 049
740 BRYANT ST. A AC
STATESVILLE 28677 704 872-8147

KIRKPATRICK, JAMES L., III AN 081
RUTHERFORD HOSPITAL A AC
DEPT. OF ANESTHESIA
RUTHERFORDTON 28139 704 286-5421

KIRKPATRICK, JOHN STEWART 032
704 W. CORNWALLIS RD. A R
DURHAM 27707 919 493-6525

KIRKSEY, WILLIAM ALBERT GP 012
302 S. KING STREET A L/RT
MORGANTON 28655

KIRSCH, CARL RICHARD OBG 029
1302 LEXINGTON AVE. A AC
THOMASVILLE 27360 919 475-2166

KIRSCH, MARK TR 060
3041 VALENCIA TERRACE A P AC
CHARLOTTE 28211 704 384-4189
FAX 704 384-5299

KISER, JEFFERSON B., JR. N 041
1910 N. CHURCH ST. A AC
GREENSBORO 27405 919 273-2511

KITCHEN, THOMAS WARD, JR. FP 067
6 E. BAYSHORE BLVD. AC
JACKSONVILLE 28540 919 347-1788

KITCHENS, THOMAS RUSSELL PS 041
1507 WESTOVER TERR., SUITE A A AC
GREENSBORO 27408 919 373-0566

KITCHIN, ALVIN PAUL, JR. FP 090
1420 E. FRANKLIN ST. AC
MONROE 28110 704 289-8724

KITTINGER, JOSEPH WILLIAM, III GE /IM 065
1202 MEDICAL CENTER DR. AC
WILMINGTON 28401 919 341-3345

KITTNER, PHILIP JOEL OBG 011
80 VICTORIA ROAD A AC
ASHEVILLE 28801 704 255-8900

KIZEN, PAUL ANDREW OBG 070
1141 N. ROAD STREET A AC
ELIZABETH CITY 27909 919 335-2061

KLEIN, DEYSY MARTINEZ AN 060
1901 RANDOLPH RD. A AC
CHARLOTTE 28207 704 375-5126

KLEIN, GEORGE FP /OM 074
309 GRANVILLE DR. * AC
GREENVILLE 27858 919 355-5454

KLEIN, JONATHAN DAVID PD /ADL 032
313 W. UNIVERSITY DR. R
CHAPEL HILL 27514 919 966-1294
FAX 919 966-6630

KLEIN, KENNETH LEROY D /DMP 000
4110 33RD ST., SE R
ROCHESTER, MN 55904 507 289-1761

KLEIN, STEVEN RUSSELL IM /GER 034
3310 BROOKVIEW HILLS BLVD. AC
SUITE 102
WINSTON-SALEM 27103 919 765-5250

KLEINMANN, RICHARD E. END /IM 060
1350 S. KINGS DR. AC
CHARLOTTE 28207 704 372-8750
FAX 704 332-7020

KLIMAS, JOHN THOMAS A /PD 060
CHARLOTTE ALLERGY CLINIC AC
2711 RANDOLPH RD., BLDG 400
CHARLOTTE 28207 704 372-7900
FAX 704 376-2216

KLINE, CHRISTOPHER JOHN 034
803-B MADISON AVE. A S
WINSTON-SALEM 27103 919 723-4928

KLOPFENSTEIN, HAROLD S. CD 034
300 S. HAWTHORNE RD. AC
DIV. OF CARDIOLOGY
WINSTON-SALEM 27103 919 748-2718

KLOSTERMYER, BROOKS VAN SLYKE DR 076
113 CEDAR CREEK DR. AC
ASHEBORO 27203 919 629-1601

KNEEDLER, WILLIAM HARDING IM 013
THE PINES #142 A L
DAVIDSON 28036 704 896-1142

KNOEFEL, ARTHUR EUGENE, JR. FP 011
PO BOX 875 A L/RT
BLACK MOUNTAIN 28711 704 669-7125

KNOTT, LAWRENCE H., JR. GS /CDS 065
1922 TRADD COURT A AC
WILMINGTON 28401 919 343-0296

KNOTT, RUFUS HENRY, II OTO /A 074
PO BOX 5007 A AC
GREENVILLE 27835 919 752-5227

KNOWLES, SUSAN E. 034
1106 MELROSE ST. S
WINSTON-SALEM 27103 919 721-0489

KNOWLTON, STEPHEN D. FP 079
629 S. MAIN ST. AC
PO BOX 330
REIDSVILLE 27320 919 349-7114

KNOX, ANGELINA VINLUAN EDRALIN PD 065
2304 DELANEY AVENUE A AC
WILMINGTON 28403 919 763-3349

KNUDSON, MARK PAUL FP 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-2246

KNUPP, CHARLES LEONARD HEM /IM 074
ECU SCHOOL OF MEDICINE A AC
DEPT. OF MEDICINE
GREENVILLE 27858 919 551-2560

KNUTSON, THOMAS MARVIN EM /FP 096
P. O. BOX 10867 AC
GOLDSBORO 27530 919 731-6060

KO, YOUNG HWAN AN 091
1801 SURIN CREEK RD., STE. 106 AC
HENDERSON 27536 919 492-4579

KOCONIS, CHRIST ALEXATOS OTO /HNS 060
1350 KINGS DRIVE AC
CHARLOTTE 28207 704 342-8000
FAX 704 332-7020

KODACK, ALBERT FP /GYN 011
6 STONEY RIDGE A L
ASHEVILLE 28804 704 252-5737

KODROFF, MICHAEL BARRY PDR /NM 074
EASTERN RADIOLOGIST AC
#9 DOCTORS PARK
GREENVILLE 27858 919 551-4972

KOEHLER, LISA ANN 060
839 SCALEYBARK RD. #11-M A R
CHARLOTTE 28209 704 355-3181

KOHLI, ASHA KIRAN CHP /P 096
505 PARKWOOD LANE AC
GOLDSBORO 27530 919 736-0203

KOHUT, ROBERT IRWIN OTO /HNS 034
300 S. HAWTHORNE RD. A * AC
WINSTON-SALEM 27103 919 748-4161

KOHUT, WALTER DENNIS IM /END 041
1511 WESTOVER TERRACE AC
GREENSBORO 27408 919 373-1054

KOKIKO, GEORGE VICTOR PTH /CLP 096
WAYNE COUNTY HOSPITAL AC
CALLER BOX 8001
GOLDSBORO 27530 919 735-1530

KOLTIS, GORDON GARY TR 054
2900 N. HERITAGE ST. A AC
LMH-CANCER CENTER
KINSTON 28501 919 551-2900

KOMAN, L. ANDREW ORS /HS 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-2878
FAX 919 748-6286

KON, NEAL DAVID TS 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4338

KONEN, JOSEPH C. FP /GPM 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-6521

KOOKEN, KEITH ROBERT GS 034
2915 LYNDHURST AVENUE A AC
WINSTON-SALEM 27103 919 765-5221
FAX 919 765-0430

KOOMEN, JACOB, JR. PH 092
909 DOGWOOD LANE A L/RT
RALEIGH 27607 919 834-4355

KOON, CRAWFORD BRYAN DR 032
2609 N. DUKE ST. AC
DURHAM 27704 919 471-8411

KOONTZ, JACK ALEXANDER FP /OM 074
E. I. DUPONT DENEMOURS CO. A AC
P. O. BOX 800
KINSTON 28501 919 522-6100

KOONTZ, THOMAS JEFFREY GS 034
4250 ALLISTAIR ROAD AC
WINSTON-SALEM 27104 919 765-5221

KOONTZ, WAYNE CARSON PD 080
720 GROVE STREET AC
SALISBURY 28144 704 636-5576

KOPELMAN, ARTHUR NPM 074
DEPT. OF PEDIATRICS A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4787

KOPITA, JEFFREY MICHAEL IM 032
DUMC, SOUTH HOSP. R
DURHAM 27710 919 684-8111

KOPP, ELLIOT JOSEPH RHU /AI 092
3831 MERTON DR. AC
RALEIGH 27609 919 781-9633

KORNBLATT, BRIAN JAY EM 065
233 SEAGULL LN. AC
WILMINGTON 28403 919 256-5814

KORNEGAY, ALONZO DIXON ORS 034
PO BOX 25007 A AC
WINSTON-SALEM 27114 919 760-0436

KORNEGAY, HERVY BASIL, SR. FP 096
238 SMITH CHAPEL ROAD AC
MOUNT OLIVE 28365 919 658-4954

KORNEGAY, LEMUEL WEYHER, JR. GS /GP 064
1041 NOELL LANE L
ROCKY MOUNT 27801 919 443-0168

KORNEGAY, RAYMOND DEWITT CDS /TS 092
BOX 10976 A L/RT
RALEIGH 27605

KORNEGAY, ROBERT DUMAIS GS 064
1041 NOELL LANE A L
ROCKY MOUNT 27801 919 443-0168

KORUDA, MARK JOSEPH GS 032
SURGERY 210 BURNETT-WOMACK AC
UNC SCHOOL OF MEDICINE
CHAPEL HILL 27599 919 966-3391

KOSERUBA, GEORGE MICHAEL PD 065
9-F THE ISLANDER A L/RT
WRIGHTSVILLE BEACH 28480 919 256-3276

KOSSOVE, ALBERT ANTHONY IM /NTR 060
1530 ELIZABETH AVENUE A L
CHARLOTTE 28204 704 377-5984

KOSSOVE, IRENE LEVY IM /GYN 060
1530 ELIZABETH AVENUE A L
CHARLOTTE 28204 704 377-5984

KOSTRUBALA, THADDEUS LEWIS P 007
1308 HIGHLAND DR. A * AC
WASHINGTON 27889 919 946-8061

KOUBA, STEPHEN HOWARD ORS 026
1300 MEDICAL DRIVE AC
FAYETTEVILLE 28305 919 484-3332
FAX 919 484-4568

KOUFMAN, JAMES ALAN /OTO 034
BOWMAN GRAY, DIV. OTO A AC
WINSTON-SALEM 27103 919 748-4161

KOURI, EDWARD WILLIAMS DR 060
CHARLOTTE RADIOLOGY A AC
3535 RANDOLPH RD., STE. 102
CHARLOTTE 28211 704 365-0343

KOURI, WILLIAM HERBERT FP 060
6900 FARMINGDALE DR. AC
CHARLOTTE 28212 704 536-1362

KOVACICH, JOHN JOSEPH IM 005
303 HOSPITAL RD. AC
SPARTA 28675 919 372-2481

KOWALSKI, HENRYK M. R 074
#9 DOCTOR'S PARK AC
GREENVILLE 27858 919 752-5000
FAX 919 752-0166

KRABILL, LAWRENCE DAVID IM /RHU 098
1700 S. TARBORO ST. AC
WILSON 27893 919 291-1300

KRAEBBER, DAVID M. U 045
404 8TH AVE., WEST AC
HENDERSONVILLE 28739 704 693-5083

KRAHNERT, JOHN FREDERICK, JR. CDS /TS 063
ONE MEMORIAL DR. A AC
PINEHURST 28374 919 295-0217

KRAMER, JAMES SCOTT 041
304 HILLSIDE DR. R
GREENSBORO 27401 919 379-4035

KRAMER, NORMAN JOHN IM /END 060
3535 RANDOLPH ROAD, STE. 300 A AC
CHARLOTTE 28211 704 365-0760

KRAMER, R. KEITH 074
102 HUNTINGRIDGE ROAD A S
GREENVILLE 27834 919 830-9278

KRAMER, STEPHEN IRWIN P /NP 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-3920
FAX 919 748-6830

KRAUS, ERIC MARSHALL OTO /OT 041
1309 N. ELM ST. A * AC
GREENSBORO 27401 919 273-9932
FAX 919 273-9936

KRAYBILL, ERNEST NISSLEY PD /NPM 032
CB #7220, UNC,DEPT. OF PED. AC
CHAPEL HILL 27599 919 966-5063

KREDEL, ERNST KARL WILHELM OM /PH 067
U.S. NAVAL HOSPITAL A AC
BOX 8, MCB
CAMP LEJEUNE 28542 919 451-2181

KREEGEL, DREW ALAN 032
119 COBBLESTONE DR. R
CHAPEL HILL 27516 919 966-3080

KREGE, JOHN HENRY 032
220 ELIZABETH ST. #A17 R
CHAPEL HILL 27514 919 966-4131

KREGE, JOHN WILSON ORS 041
1505 WESTOVER TERR. A AC
GREENSBORO 27408 919 275-0927

KREMER, WM. ALFRED 074
208 N. EASTERN ST. A S
GREENVILLE 27858 919 830-1885

KREMERS, MARK STUART CD 060
1718 E. 4TH ST. AC
CHARLOTTE 28204 704 343-9800
FAX 704 347-2011

KREMERS, SCOTT ALEX PUD /CD 060
1718 E. 4TH ST. #801 A AC
CHARLOTTE 28204 704 375-9932

KRESHON, MARTIN JOHN OPH 060
1600 E. THIRD STREET A * AC
CHARLOTTE 28204 704 358-4111
FAX 704 358-4157

KRINER, ARTHUR FREDERICK DR 041
P. O. BOX 13005 A AC
GREENSBORO 27415 919 379-4141

KRISHINGNER, GENE LAVERE GS 045
ROUTE #8, BOX 81-A AC
HENDERSONVILLE 28739 704 693-1729

KRISHNAN, C. SETHU U 079
515 THOMPSON ST. STE. C A AC
EDEN 27288 919 623-8451

KROEGER, RICHARD JAMES GE /IM 054
3506 LAKEVIEW TRAIL AC
KINSTON 28501 919 522-0285

KROHN, JOHN RAMON PS 065
2305 CANTERWOOD DR. A AC
WILMINGTON 28401 919 343-0119

KROLL, LARRY LEROY ORS 011
53 S. FRENCH BROAD ST. A AC
ASHEVILLE 28801 704 252-7180

KRONCKE, FREDERICK GEORGE, JR. OBG 064
200 NASH MEDICAL ARTS MALL A AC
ROCKY MOUNT 27801 919 443-5941
FAX 919 443-7059

KROOVAND, ROY LAWRENCE U /PD 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4131
FAX 919 748-4204

KRUEGER, ALAN LEE P 011
90 SOUTHSIDE AVE. STE. 200 A * AC
ASHEVILLE 28801 704 252-6680

KRUG, JOSEPH HOFFMANN, JR. OPH 060
2620 E. 7TH ST., STE. 300 AC
CHARLOTTE 28204 704 377-4448

KRUM, RONALD EUGENE FP 045
P. O. BOX 5420 A AC
FLETCHER 28732 704 687-1416

KRUSE, RICHARD STEVEN DR /NM 063
PO BOX 1795 A AC
SOUTHERN PINES 28387 919 295-1569

KRYSTAL, ANDREW DARRELL 032
BOX 3812, DUMC A R
DURHAM 27710 919 684-8111

KUBITSCHECK, KENNETH R. IM 011
445 BILTMORE CTR., STE. 407 A AC
ASHEVILLE 28801 704 258-0397

KUESER, THOMAS JOSEPH PD /NPM 060
PO BOX 32861 AC
CAROLINAS MEDICAL CENTER
CHARLOTTE 28232 704 355-3156

KUK, DENNIS STANLEY OBG /GYN 098
1704 S. TARBORO STREET A AC
WILSON 27893 919 291-7001
FAX 919 237-6114

KULP, KENNETH ROBERT D 092
3100 DURALEIGH RD. AC
RALEIGH 27612 919 881-5409
FAX 919 881-5630

KUMAR, KAMLESH PUD /IM 064
108 N. ENGLEWOOD DR. AC
ROCKY MOUNT 27801 919 443-1126

KUMAR, SATISH KUMAR PUD /IM 064
108 N. ENGLEWOOD DR. AC
ROCKY MOUNT 27801 919 443-1126

KUNSTLING, TED RICHARD PUD /IM 092
3320 WAKE FOREST RD. AC
RALEIGH 27609 919 872-4850
FAX 919 878-9260

KURAD, JOSEPH WARD U 018
1202 N. CENTER STREET A AC
HICKORY 28601 704 322-4340

KUROWSKI, KARIN I. 034
5208 CAROLWOOD DR. A S
GREENSBORO 27407 919 292-4663

KURRLE, ROBERT WM. OPH 049
PO BOX 591 AC
IREDELL EYE CLI.
STATESVILLE 28677 704 872-4108

KURTS, YURY AN 012
PO BOX 700 AC
VALDESE GEN. HOSPITAL
VALDESE 28690 704 874-2251

KURTZ, KEVIN JOHN FP 011
1803 ABBEY CIRCLE S
ASHEVILLE 28805 704 298-8018

KURZMANN, RICHARD WALTER OBG 092
4420 LAKE BOONE TR., STE. 301 AC
RALEIGH 27607 919 781-7450

KUSHNER, MICHAEL JAMES N 098
1704 S. TARBORO ST. * AC
WILSON 27893 919 399-2418
FAX 919 237-6114

KUSHNICK, THEODORE PD 074
DEPT. OF PEDIATRICS A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2525
FAX 919 551-3292

KUSUMI, YOSHITARO P /PYM 092
1004 DRESSER COURT, STE. 106 A AC
RALEIGH 27609 919 876-5530

KUTCHER, MICHAEL A. CD /IM 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-2960

KUTNER, WILLIAM A., JR. ORS 049
628 CARPENTER AVE. AC
MOORESVILLE 28115 704 664-1060

KUTSCH, RICHARD MICHEL FP 054
2502 N. HERITAGE ST., STE. C P AC
KINSTON 28501 919 523-5800

KUZMA, GARY ROBERT HS /ORS 041
1103 N. ELM ST., STE. 200 A P AC
GREENSBORO 27401 919 378-0811

KWIATKOWSKI, PETER FRANK IM 041
408-B PARKWAY DR. A AC
GREENSBORO 27401 919 275-9804

KYLSTRA, JAN ANDREW OPH 032
NC. MEMORIAL HOSP. * AC
DEPT. OF OPH
CHAPEL HILL 27599 919 966-5296

KYLSTRA, JOHANNES ARNOLD PUD /A 032
4415 MALVERN RD. AC
DURHAM 27707 919 493-1574

LABINER, DAVID MARK 032
508 FULTON ST. R
DUMC, VA HOSP. BLDG. 16
DURHAM 27705 919 286-6811

LACKEY, ROBERT STEVENSON R 060
2118 PINEWOOD CIR. * L/RT
CHARLOTTE 28211 704 365-0343

LACROIX, CAROL ANN FP 084
320 YADKIN STREET AC
ALBEMARLE 28001 704 982-9144

LADWIG, HAROLD ALLEN N 098
1600 CANAL DRIVE A AC
WILSON 27893 919 237-5877

LADWIG, STEPHEN HAROLD DR /NM 064
2400 CURTIS ELLIS DR. AC
NASH GENERAL HOSP.
ROCKY MOUNT 27804 919 443-8083

LAFFERTY, JOHN MORRISON OBG 012
PO BOX 597 AC
RUTHERFORD COLLEGE 28671 704 874-2251

LAHSER, CHARLES IRVING PD 036
548 BRIDLEPATH TRAIL A L/RT
GASTONIA 28054 704 865-5025

LAI, CHI-KWONG CD /IM 049
P. O. BOX 1460 AC
STATESVILLE 28677 704 873-0281

LAIRD, WILLIAM KENNETH PS 060
421 N. WENDOVER RD. A AC
CHARLOTTE 28211 704 365-8255

LAKIN, KAREN LUM 074
322 LINDSAY DR. #5-D S
GREENVILLE 27834 919 756-2989

LALONDE, JOHN CHARLES FP 041
104 E. NORTHWOOD ST. AC
GREENSBORO 27401 919 275-6445

LAM, DOUGLAS EDWARD FP 063
105 PERRY DRIVE * AC
SOUTHERN PINES 28387 919 692-4802

LAMANNA, ROGER WEED NEP /IM 098
1700 TARBORO STREET AC
WILSON 27893 919 291-1300

LAMBERT, JAMES ROYALL FP 096
130 N. CENTER ST. AC
MOUNT OLIVE 28365 919 658-4954

LAMBERTSEN, CHRISTIAN J., JR. FP /OM 032
PO BOX 12833 A AC
RESEARCH TRIANGEL PK 27709 919 549-9321

LAMBETH, WILLIAM ARNOLD, III PS /GS 092
1112 DRESSER COURT A AC
RALEIGH 27609 919 872-2616
FAX 919 872-2771

LAMBETH, WILLIAM RICK OBG 032
2609 N. DUKE STREET, STE. 204 A AC
DURHAM 27704 919 471-8402

LAMM, KENNETH RAND 032
105 FIDELITY ST. A-4 S
CARRBORO 27510

LAMM, LEROY BARDEN P 080
P. O. BOX 427 A AC
ROCKWELL 28138 704 279-7034

LAMPLEY, CHARLES G. OBG 060
744 HOLLIS RD. A R
CHARLOTTE 28209 704 355-2000

LAMPLEY, CHARLES GORDON, III OBG 023
110 W. GROVER ST. A AC
SHELBY 28150 704 487-5258

LANCASTER, MICHAEL STEWART P /CHP 092
1100 NAVAHO DR. STE. 105 AC
RALEIGH 27609 919 872-3851

LAND, MICHAEL ROY OBG 060
150 PROVIDENCE ROAD A AC
CHARLOTTE 28207 704 377-0461
FAX 704 343-0700

LANDIS, EDWARD EVERETT, JR. PUD /IM 060
1350 KINGS DRIVE AC
CHARLOTTE 28207 704 372-8750

LANDIS, SUZANNE ELIZABETH IM 011
491 BILTMORE AVE. AC
ASHEVILLE 28801 704 258-0635

LANDON, HENRY CLAYTON,III FP /IM 097
PO DRAWER 1187 L/RT
N. WILKESBORO 28659 919 838-5761

LANDVATER, LANCE ERIC CDS /TS 092
3020 NEW BERN AVE., STE. 560 AC
RALEIGH 27610 919 231-6333

LANE, JERALD PAUL P 060
1900 RANDOLPH RD., STE. 918 A P AC
CHARLOTTE 28207 704 333-7722

LANE, JOHN WESTON OBG 032
120 CONNER DR., STE. 101 AC
PO BOX 3317
CHAPEL HILL 27514 919 942-8571

LANE, KATHRYN LEE PTH 032
803 PARK RIDGE #A5 R
DURHAM 27713 919 684-3300

LANE, ROBERT EARL FP 021
118 W. MARKET ST. AC
HERTFORD 27944 919 426-5711

LANE, TIMOTHY WALTER ID /IM 041
1200 N. ELM ST. AC
GREENSBORO 27401 919 379-4062

LANE, WINSTON EARL, III P 074
1705 W. SIXTH ST., BLDG. H A AC
GREENVILLE 27834 919 758-4810

LANEY, ROBERT GAFFNEY,III GS 023
200 W. GROVER ST. A AC
SHELBY 28150 704 487-8591

LANG, DELANO ROOSEVELT, JR. FP 008
ROANOKE CHOWAN HOSPITAL AC
AHOSKIE 27910 919 332-3560

LANG, JOHN ALBERT, III IM /DIA 092
615 ST. MARY'S STREET AC
RALEIGH 27605 919 828-7773

LANG, STEPHEN NORMAN ORS 032
BOX 2919, DUMC A * AC
DURHAM 27710 919 684-3949

LANGDELL, ROBERT DANA PTH /BLB 032
UNC SCHOOL OF MEDICINE,228-H L/RT
CHAPEL HILL 27599 919 966-4333

LANGLEY, CHARLES PITMAN, III IM 023
808 SCHENCK STREET A AC
SHELBY 28150 919 482-1482

LANGLEY, JOHN R. GS /VS 026
3616 CAPE CENTER DR., STE. A A AC
FAYETTEVILLE 28304

LANGLEY, JOHN THOMAS ORS 054
KINSTON CLINIC, NORTH, STE. F A AC
KINSTON 28501 919 522-2020

LANGLEY, RICKY LEE IM /OM 074
DEPT. OF PREVENTIVE MED. A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-3227

LANGNER, JULIETTE PARTHENAY 074
2410 E. THIRD ST., APT. A A S
GREENVILLE 27858

LANGSTON, BERNARD LEROY, III GP 010
P. O. BOX 1934 A P AC
SHALLOTTE 28459 919 754-8731

LANIER, VERNE CLIFTON, JR. PS /GS 032
300 CRUTCHFIELD ST. A AC
DURHAM 27704 919 471-3406

LANINGHAM, JAMES E. T. PTH /BLB 063
P. O. BOX 3000 A * AC
MOORE MEMORIAL HOSPITAL
PINEHURST 28374 919 295-7978
FAX 919 295-7878

LANNIN, DONALD ROWE GS 074
DEPT. OF SURGERY A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-5418
FAX 919 551-5775

LANNING, CHARLES FREDRIC AN 092
14208 ALLISON DR. A AC
RALEIGH 27615 919 832-7988

LANSING, ANN MEREDITH IM 011
215 DOCTORS BLDG. AC
ASHEVILLE 28801 704 255-8835

LAPP, CHARLES WARREN IM /PD 092
3400 EXECUTIVE DRIVE A AC
RALEIGH 27609 919 878-0900

LAPRADE, BENNETT WATTERSON OBG 054
123 DOGWOOD LANE RT
KINSTON 28501 919 527-7605

LARABEE, LAWRENCE N. 034
1001 WELLINGTON RD. A S
WINSTON-SALEM 27106 919 773-1474

LARCADE, LEE ALAN P 092
1702 PINEVIEW ST. C
RALEIGH 27608 919 684-8955

LARGE, HIRAM LEE, JR. PTH 060
8919 PARK RD. DC-4 A L/RT
SOUTHMINSTER
CHARLOTTE 28210 704 551-7054

LARKIN, ERNEST WADDILL, III PTH 074
DEPT.OF CLI. PTH/DIAG. MED. A AC
ECU SCH. OF MED BRODY 1F-79
GREENVILLE 27858 919 551-5911

LARKIN, ERNEST WADDILL, JR. OPH 007
410 RIVERSIDE DR. L/RT
WASHINGTON 27889 919 946-2171

LARKIN, GLENN MICHAEL FOP /LM 060
4000-E PROVIDENCE RD. AC
CHARLOTTE 28211 704 364-4718

LARKIN, ROBERT W., JR. 032
201 HOWELL ST., APT. 5-C S
CHAPEL HILL 27514 919 933-5096

LARSEN, ERIC GS /CDS 063
P. O. BOX 2000 A P AC
PINEHURST 28374 919 295-0262

LARSEN, LARS CHRISTIAN FP 026
1601 OWEN DRIVE A AC
FAYETTEVILLE 28304 919 323-1152

LARSON, JOHN DAVID, JR. EM /OBG 067
204 GREEN DOLPHIN ST. L
MOREHEAD CITY 28557 919 247-2097

LARSON, KIP LEROY FP 034
7811 N. POINT BLVD. C
WINSTON-SALEM 27106 919 789-0454

LARSON, RICHARD MARTIN GS /CDS 074
905 JOHNS HOPKINS DR. AC
GREENVILLE 27834 919 758-1747
FAX 919 758-6809

LASATER, JOHN DAVID U 025
800 HOSPITAL DR., STE. 4 A P AC
NEW BERN 28560 919 633-2712

LASHLEY, CURTIS R. OM 041
JEFFERSON-PILOT LIFE INS.CO. A AC
PO BOX 21008
GREENSBORO 27420 919 691-3193
FAX 919 691-3938

LASKOWITZ, DANIEL 032
2A CARSON CIRCLE S
DURHAM 27705 919 383-8367

LASSALETTA, MARGARITA M. 074
203 SHILOH DR. #B A * S
GREENVILLE 27834 919 355-5897

LASSITER, KENNETH ROBERT LEE NS 060
PRESBYTERIAN MEDICAL TOWER A AC
1718 E. FOURTH ST. #901
CHARLOTTE 28204 704 372-8860

LASSITER, RICHARD EDWARD OBG 032
120 CONNER DR., STE. 101 AC
PO BOX 3317
CHAPEL HILL 27514 919 942-8571

LASSITER, WILL HARDEE, JR. GP 051
ROUTE #3, BOX 90 A L/RT
FOUR OAKS 27524 919 934-8783

LASSITER, WILLIAM EDMUND NEP /IM 032
UNC, DEPT. OF MED. AC
CB #7005
CHAPEL HILL 27599 919 966-4275

LASTER, ANDREW JAY RHU /IM 060
125 BALDWIN AVE. A AC
CHARLOTTE 28204 704 338-6300

LATHAM-SADLER, BRENDA FP 034
8519 BROOK MEADOW LN. A AC
LEWISVILLE 27023 919 945-4439

LATOURETTE, KENNETH ABRAM PTH 045
P. O. BOX 177 A L/RT
FLAT ROCK 28731 704 692-1641

LATZ, JOHN E., JR. 034
1322 MADISON AVE. A S
WINSTON-SALEM 27103 919 723-5305

LATZ, TRACY J. T. 034
2273 WOODSONG LN. * R
WINSTON-SALEM 27106 919 924-0889

LAUER, THOMAS EUGENE P /ALD 040
624 QUAKER LN., STE. A-111 A P * AC
HIGH POINT 27262 919 889-4122

LAUPUS, WILLIAM EDWARD PD /PNP 074
PREVENTIVE MED/PUBLIC HEALTH A AC
ECU SCH. OF MED. DEAN EMERITUS
GREENVILLE 27858 919 551-2201
FAX 919 551-2012

LAURENS, JOHN CRS 011
445 BILTMORE CENTER, STE. 303 A AC
ASHEVILLE 28801 704 258-8181

LAVENDER, DICK REDMOND ORS 041
201 E. WENDOVER AVENUE A AC
GREENSBORO 27401 919 275-6318

LAVIGNE, MARK KINO 074
16 MELSTONE TURN S
DURHAM 27707 919 758-1822

LAWING, DANIEL PHILMON GP 055
212 E. WATER STREET AC
LINCOLNTON 28092 704 735-5888

LAWLESS, MICHAEL RHODES PD 034
DEPT. OF PEDIATRICS AC
BOWMAN GRAY SCH. OF MED.
WINSTON-SALEM 27103 919 727-8108

LAWRENCE, BENJAMIN JONES, JR. GS /PS 086
813 ROCKFORD ST. L/RT
PO BOX 72
MOUNT AIRY 27030 919 786-7871

LAWRENCE, DALE N. IM /ID 000
6003 EXECUTIVE BLVD. RM 235-P A AC
DIV. OF AIDS-NIAID-NIH
ROCKVILLE, MD 20892 301 496-8200

LAWRENCE, HAL CLIFFORD, III OBG 011
60 LIVINGSTON ST. A AC
ASHEVILLE 28801 704 254-5126

LAWRENCE, JOHN CHARLES GS 078
P. O. BOX 1068 L/RT
LUMBERTON 28358 919 738-8571

LAWRENCE, JOHN ELMORE, JR. CD /IM 011
P.O. BOX 7239 A AC
ASHEVILLE 28802 704 254-8054

LAWRENCE, PATRICIA ANN GYN 060
1001 BLYTHE BLVD. STE. 402 A AC
CHARLOTTE 28203 704 355-5214

LAWRENCE, ROBERT L. OTO /HNS 041
321 W.WENDOVER AVENUE A AC
GREENSBORO 27408 919 379-9445

LAWRENCE, ROBERT S. FP 081
313 PINE STREET AC
RUTHERFORDTON 28139 704 286-2302

LAWSON, JAMES DOUGLAS VS /GS 041
1317 N. ELM ST., STE. 1 A AC
GREENSBORO 27401 919 373-8245

LAYTON, DENNIS SHELDON IM 060
RANDOLPH RD. IM ASSOC. AC
1900 RANDOLPH RD. #812
CHARLOTTE 28207 704 568-6500

LE, TIN TRONG GP 096
116 POINT SHORE DR. AC
GOLDSBORO 27534 919 778-0851

LEACH, WILLIAM B. PTH 065
306 WIDGEON DR. A L/RT
HAMPSTEAD 28443 919 270-4772

LEAK, FRANK WALTER FP 082
CLINTON MEDICAL CLINIC * AC
CLINTON 28328 919 592-6011

LEAK, JESSIE ARONOW AN 026
PO BOX 53844 AC
FAYETTEVILLE 28305 919 323-5491

LEATHERMAN, HUGH K., JR. U 092
3901 COMPUTER DR. AC
RALEIGH 27609 919 781-5104

LEB, STEPHEN MARC GS 092
3801 COMPUTER DR. #207 AC
RALEIGH 27609 919 787-8393

LEBAUER, EDMUND JOSEPH CD /IM 041
520 N. ELAM AVE. AC
GREENSBORO 27403 919 547-1750
FAX 919 547-1717

LEBAUER, EUGENE SHANER IM /A 041
PO BOX 10828 AC
520 N. ELAM AVE.
GREENSBORO 27404 919 547-1700

LEBAUER, MAURICE LEON GS 041
2023 ST. ANDREWS RD. A L/RT
GREENSBORO 27408 919 273-3258

LEBAUER, SAMUEL MORGENSTERN GE/IM 041
PO BOX 10828 AC
520 N. ELAM AVE.
GREENSBORO 27404 919 547-1700

LEBENSON, BERNARD STEPHEN U 092
101 SW CARY PARKWAY,STE. 200 P C
CARY 27511 919 467-3203

LECROY, CHARLES M., JR. ORS 032
4600 UNIVERSITY DR., APT. 602 R
DURHAM 27707 919 684-8111

LEDBETTER, JOHN WINSLOW N 011
7 MCDOWELL STREET A P AC
ASHEVILLE 28801 704 255-7776

LEDER, RICHARD ADAM DR 032
6 STRIDING RIDGE CT. A * AC
DURHAM 27713 919 681-2711

LEE, ALLEN HENRY GP 051
P. O. BOX 8 A P L
SELMA 27576 919 965-3251

LEE, CHOO HYUNG IM /HEM 012
BROUGHTON HOSPITAL A AC
MORGANTON 28655 704 433-2501

LEE, DAE HEE FP 001
2142 N. CHURCH STREET AC
BURLINGTON 27215 919 227-7456

LEE, DAVID WAYNE OBG 033
101 CLINIC DR. AC
TARBORO 27886 919 823-6221

LEE, ESTHER JOO 032
705-B W. MAIN ST. A S
CARRBORO 27510 919 967-7722

LEE, FRANCIS BROWN GS 090
501 S. CHURCH ST. A L/RT
PO BOX 457
MONROE 28110 704 283-4363

LEE, HENRY NEILL, JR. IM 078
395 WEST 27TH STREET A AC
LUMBERTON 28358 919 739-7551

LEE, IL SUNG IM 011
P. O. BOX 370 AC
ENKA 28728 704 667-5298

LEE, J. GARY OTO /HNS 041
321 W. WENDOVER AVENUE A AC
GREENSBORO 27408 919 379-9445

LEE, JAMES MOBLEY TS 041
1317 N. ELM ST., STE. 1 A AC
GREENSBORO 27401 919 373-8245

LEE, JESSE THOMAS, III IM /ON 074
1705 W. 6TH ST., BLDG. E AC
GREENVILLE 27834 919 752-4610

LEE, JOSEPH DAVID R 055
P. O. BOX 954 AC
LINCOLNTON 28092 704 735-6654

LEE, JOSEPH, III FP 023
711 W. MOUNTAIN STREET AC
PO BOX 1668
KINGS MOUNTAIN 28086 704 739-5456

LEE, K. STUART NS 074
2325 STANTONSBURG RD. A AC
GREENVILLE 27834 919 752-5156
FAX 919 752-0419

LEE, KYU YONG GP 063
MCCAIN HOSPITAL AC
MCCAIN 28361 919 944-2351

LEE, KYUNG KUN GS 012
P. O. BOX 2203 AC
MORGANTON 28655 704 433-2463

LEE, PETER HOGYUN 032
1521 E. FRANKLIN ST., B-210 A S
CHAPEL HILL 27514 919 933-1113

LEE, ROBERT HAMMILL FP 018
PO BOX 1239 A AC
CONOVER 28613 704 464-3821

LEE, SAE SOON GS /PDS 012
350 E. PARKER RD. A AC
MORGANTON 28655 704 437-7395

LEE, SOONG HYUN P 064
106 NASH MEDICAL ARTS MALL * AC
ROCKY MOUNT 27804 919 443-8002

LEE, TERRENCE JOHN ID /IM 011
445 BILTMORE CTR., STE. 500 AC
ASHEVILLE 28801 704 258-9635

LEE, WILLIAM DAVID FP 092
3100 BLUE RIDGE RD., STE. 202 AC
RALEIGH 27612 919 782-0146

LEE, YEN CHICH AN 060
PO BOX 33549 P AC
CHARLOTTE 28233 704 371-4049

LEEPER, WILLIAM EDWARD, JR. IM 036
2525 PINEWOOD RD. A L/RT
GASTONIA 28054 704 865-5153

LEET, DOUGLAS CHARLES U 092
3320 WAKE FOREST RD., STE. 100 AC
RALEIGH 27609 919 790-0036

LEFEVER, NANCY QUINN FP 000
1601-B OWEN DR. R
FAYETTEVILLE 28304 919 323-1152

LEFKOWITZ, DAVID S. N 034
2544 HUNTINGTON WOODS DR. A AC
WINSTON-SALEM 27103 919 748-2333

LEFKOWITZ, DAVID, III PDA /PD 060
2711 RANDOLPH RD. STE. 400 AC
CHARLOTTE 28207 704 372-7900

LEFKOWITZ, JERRY B. HEM /PTH 032
207-10 MELVILLE LOOP A R
CHAPEL HILL 27514 919 966-3311

LEFLER, CHARLES IM 088
BLDG. #2, MEDICAL PARK DR. AC
BREVARD 28782 704 884-4134

LEFLER, RUFUS STAMEY, III IM /CD 084
214 E. NORTH STREET A AC
ALBEMARLE 28001 704 982-1136

LEFLER, WADE HAMPTON, JR. OPH 018
P. O. BOX 2588 AC
HICKORY 28601 704 322-2050

LEGRAND, GORDON BUCK PTH 092
3000 NEW BERN AVENUE A AC
RALEIGH 27610 919 755-8260

LEGRAND, SUSAN B. ON /IM 036
1050 X-RAY DR. STE. B AC
GASTONIA 28054 704 861-1405

LEHAN, LEIGH STEELE PD 092
2800 BLUE RIDGE RD., STE. 501 AC
RALEIGH 27607 919 781-7490

LEIDY, LUANN P /CHP 092
4322 BEECHNUT LANE A AC
DURHAM 27707 919 490-6055

LEIGHT, GEORGE STAPLES, JR. GS 032
2 SURREY LANE A AC
DURHAM 27707 919 684-6849

LEINBACH, LAURENCE B. DR 034
BOWMAN GRAY SCH. OF MED. A AC
WINSTON-SALEM 27103 919 748-3416

LELIEVER, WM. CHARLES OTO /OT 053
1911 K. M. WICKER DR. * AC
SANFORD 27330 919 774-6829

LEMASTER, PIERRE CLIFFORD PD 026
1291 OLIVER STREET AC
FAYETTEVILLE 28304 919 483-2646

LENAHAN, C. RODNEY U 063
PO BOX 2000 A AC
PINEHURST 28374 919 295-0250

LENAHAN, DEBORAH SMITHERMAN OPH 029
2 HOSPITAL DR. A P AC
LEXINGTON 27292 704 243-2436

LENDERMAN, MARK DAY 034
2427 CHEROKEE LN. R
WINSTON-SALEM 27103 919 777-0028

LENDLE, DONALD LAWRENCE FP 034
147 COLUMBINE DR. AC
WINSTON-SALEM 27106 919 722-9535

LENNON, DAVID STANCIL AN 060
2221 HOGAN CT. A P AC
CHARLOTTE 28270 704 371-4049

LENNON, HERSHEL C. PTH 041
3504 FLINT ST. #C217 L/RT
GREENSBORO 27405 919 545-0124

LENTZ, ROBERT PRESTON PD 041
510 N. ELAM AVE., STE. 202 AC
GREENSBORO 27403 919 299-3183

LENTZ, SAMUEL SMITH OBG /GO 034
300 S. HAWTHORNE RD. A P AC
WINSTON-SALEM 27103 919 748-6673
FAX 919 748-4837

LEONARD, BAXTER COLUMBUS J. FP 018
24 SECOND AVE., NE A AC
MEDICAL ARTS CLI.
HICKORY 28601 704 328-2231

LEONARD, DONALD DEAN PTH /DMP 041
1200 N. ELM STREET A AC
GREENSBORO 27401 919 379-4074

LEONARD, JOHN RICHARD, III NS 074
125 MOYE BOULEVARD A AC
GREENVILLE 27834 919 752-5156

LEONARD, RALPH BEAUMONT EM 034
300 S. HAWTHORNE ROAD A AC
WINSTON-SALEM 27103 919 748-4626

LEONARD, WALTER EVAN FP 018
130 27TH STREET, S.W. AC
HICKORY 28602 704 322-1153

LEONE, CHERYL LEVINE PTH /NM 036
1740 MONTCLAIR AVENUE AC
GASTONIA 28054 704 866-2851
FAX 704 866-2125

LEONE, MICHAEL RALPH GS 041
1317 N. ELM ST. STE. #5 A AC
PO BOX 10037
GREENSBORO 27401 919 274-8444

LEONE, PHILIP GEORGE PTH /DMP 036
1740 MONTCLAIR AVENUE A AC
GASTONIA 28054 704 866-2851
FAX 704 866-2125

LEONHARDT, GARY GENE 074
114 HEMLOCK DR. A R
GREENVILLE 27858 919 551-4100

LEPORE, RALPH GP 041
4801 FOREST OAKS DR. AC
GREENSBORO 27406 919 674-7117

LESESNE, HENRY ROBY GE /IM 032
N. C. MEMORIAL HOSPITAL AC
CHAPEL HILL 27599 919 966-2511

LESHER, DONALD TICE DR 081
909 N. WASHINGTON STREET A AC
RUTHERFORDTON 28139 704 286-5233

LESHIN, BARRY D 034
300 S. HAWTHORNE RD. A AC
DEPT. OF DERMATOLOGY
WINSTON-SALEM 27103 919 748-2768
FAX 919 748-4204

LESLIE, JOHN BRUCE AN 032
BOX 3094, DUMC A AC
DURHAM 27710 919 681-5991
FAX 919 681-2735

LESSER, GLENN JAY 034
300 S. HAWTHORNE RD. A R
WINSTON-SALEM 27103 919 748-2011

LESTER, ROBERT HILTON OBG 036
1225 E. GARRISON BLVD. A AC
GASTONIA 28054 704 867-6386

LEVI, GEORGE ALBERT OPH 026
2311 ROLLINGHILL RD. A L/RT
FAYETTEVILLE 28304 919 484-6144

LEVINE, MAX PHILLIP GS/CDS 086
180 N. PARKWOOD MEDICAL CENTER A P AC
ELKIN 28621 919 835-7600

LEVINE, RONALD H. PH /PD 092
2404 WHITE OAK ROAD A * AC
RALEIGH 27609 919 782-0838

LEVINER, JOHN L., JR. CD 026
1756 METROMEDICAL DR. A AC
FAYETTEVILLE 28304 919 323-1322

LEVINSON, SIDNEY ENGEL GE /IM 032
891 W. WILLOW DRIVE AC
CHAPEL HILL 27514 919 942-5123

LEVITIN, PETER MARK IM /RHU 041
301 E. WENDOVER., STE. 200 A AC
GREENSBORO 27401 919 274-3241

LEVITT, STEPHEN ROBERT P 032
500 EASTOWNE DR., STE. 202 AC
CHAPEL HILL 27514 919 942-8761

LEVY, ALAN MERRILL GS /VS 036
1089 X-RAY DR. AC
GASTONIA 28054 704 864-8377
FAX 704 867-3179

LEVY, JILL RANDI 032
4101 FIVE OAKS DR. #36 A S
DURHAM 27707 919 490-0262

LEVY, STANLEY BENJAMIN D 032
891 WILLOW DRIVE A AC
CHAPEL HILL 27514 919 942-3106

LEWIS, ANDREW JACKSON, JR. OBG 060
2801 RANDOLPH RD. AC
CHARLOTTE 28211 704 377-5675

LEWIS, ARCH RITCHIE OM /IM 041
3100 ROUND HILL RD. A AC
GREENSBORO 27408 919 668-3782

LEWIS, CHARLES PELL, JR. OPH /OTO 079
813 S. MAIN ST. L/RT
REIDSVILLE 27320 919 342-0588

LEWIS, DANIEL MICHAEL D 060
4311 WOODGLEN LANE A RT
CHARLOTTE 28226 704 364-6110

LEWIS, DOCKERY DURHAM, JR. PD 049
PO BOX 1821 AC
STATESVILLE 28677 704 878-2011

LEWIS, HENRY, III OBG 008
403 S. CURTIS ST. A AC
AHOSKIE 27910 919 332-2260

LEWIS, MICHAEL R. FP 018
PO BOX 629 P AC
HUDSON 28638 704 728-4875

LEWIS, N. MAXVILLE, JR. FP 014
912 CONNELLY SPRINGS RD. AC
LENOIR 28645 704 728-8224

LEWIS, NEWMAN MAXVILLE IM 049
PO BOX 1821 AC
STATESVILLE 28677 704 878-2011

LEWKOW, LAWRENCE M. HEM 074
ECU SCHOOL OF MEDICINE AC
DEPT. OF HEM,BRODY HALL,3E127
GREENVILLE 27858 919 551-2560

LHOTSKY-BRODIE, DORA GE /IM 041
PO BOX 10828 AC
520 N. ELAM AVE.
GREENSBORO 27404 919 547-1700

LIANG, MARK JOSEPH TR 060
421-D S. SHARON-AMITY RD. A AC
CHARLOTTE 28211 704 362-1315

LICAUSE, GINA GARRETT FP 060
1793 JAMESTON DR. A R
CHARLOTTE 28209 704 358-1360

LICHSTEIN, PETER RIBACK IM 074
DEPT. OF MEDICINE AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4633

LIDE, THOMAS NORWOOD PTH 034
10 SOVEREIGN DRIVE A L/RT
HILTON HEAD ISLAND, SC 29928 803 681-6815

LIEBELT, RALPH ARTHUR ORS 032
2609 N. DUKE ST.,STE. 301 A P AC
DURHAM 27704 919 471-8431

LIEBERMAN, SCOTT ALAN 034
2400 WESTOVER DR. * S
WINSTON-SALEM 27103 919 750-0950

LIEBERT, KAREN FUREY OBG 008
400 S. CURTIS ST. A AC
AHOSKIE 27910 919 332-6161

LIES, STEPHEN CRAIG OBG 096
102 HANDLEY PARK CT. A AC
GOLDSBORO 27530 919 734-3344
FAX 919 735-3025

LIESEGANG, GLEN R. FP 095
PO BOX 8 AC
BLOWING ROCK 28605 704 295-3116

LIEU, CHONG HIEUN PD /GP 049
146 E. MCLELLAND AVE. AC
MOORESVILLE 28115 704 663-1155

LIGHT, ANDREW IRA GS 036
1089 X-RAY DR. AC
GASTONIA 28054 704 864-8377

LIGON, HAROLD BELTON FP 011
MEDICAL CENTER BUILDING AC
86 VICTORIA ROAD
ASHEVILLE 28801 704 252-1585

LILES, RICHARD VERNON, JR. FP 084
320 YADKIN STREET P * AC
ALBEMARLE 28001 704 982-9144

LILLARD, PATRICK L. PM 034
3333 SILAS CREEK PKWY. A AC
WINSTON-SALEM 27103 919 760-5763

LILLEY, LORI BROWN 032
910 WOODMONT BLVD. #S-22 S
NASHVILLE, TN 37204

LILLY, MARY KLINGENSMITH 032
BOX 2789, DUMC S
DURHAM 27710 919 383-0231

LIMBER, GERALD KECK PTH 076
2408 BERKLEY PL. A AC
ASHEBORO 27203 919 625-5151

LIN, ALVIN BAY 034
300 S. HAWTHORNE RD. #255 S
WINSTON-SALEM 27103

LINA, JOHN RAYMOND DR /R 063
203 RIDGEVIEW ROAD A AC
SOUTHERN PINES 28387 919 295-7040

LINCOLN, CLINTON ROBERT ORS 032
1828 HILLANDALE ROAD A AC
DURHAM 27705 919 286-1249
FAX 919 286-7575

LINCOLN, DAVID OGDEN ORS 011
69 MCDOWELL ST. A AC
ASHEVILLE 28801 704 255-7526

LIND, RICHARD NORMAN IM /ON 011
80 VICTORIA ROAD AC
ASHEVILLE 28801 704 258-0994

LINDER, DONALD EARLE AN 041
PO BOX 9091 AC
GREENSBORO 27408 919 288-6565

LINDERMAN, JAMES ALAN PD 060
167-L S. TRADE ST. AC
PO BOX 2564
MATTHEWS 28106 704 847-0572

LINDLEY, JOSEPH J. GS 001
7763 LINDLEY MILL RD L/RT
GRAHAM 27253 919 227-3621

LINDOW, LARRY GENE IM /GP 060
6301 MORRISON BLVD. A AC
CHARLOTTE 28211 704 362-6200

LINDQUIST, RICHARD KURT OBG 012
2203 S. STERLING ST., STE. 132 AC
MORGANTON 28655 704 437-6122
FAX 704 438-8361

LINDSLEY, ERIC FP 026
1601-B OWEN DR. A R
FAYETTEVILLE 28304 919 323-1152

LINEBERGER, THOMAS H. IM 063
1902-C N. SANDHILLS BLVD. A P AC
ABERDEEN 28315 919 692-4011

LINFORS, EUGENE WILLIAM IM 032
PO BOX 16999 A AC
4205 BEN FRANKLIN BLVD.
DURHAM 27704 919 477-6900

LINK, ARTHUR STANLEY, JR. ID /IM 034
3310 BROOKVIEW HILLS, #204 AC
WINSTON-SALEM 27103 919 765-8420

LINK, KERRY MICHAEL R 034
300 S. HAWTHORNE RD. A AC
DEPT. OF RADIOLOGY
WINSTON-SALEM 27103 919 748-6890
FAX 919 748-2870

LINK, MELVIN ROBERT OTO 060
3323 STANWYCK COURT A L/RT
CHARLOTTE 28211 704 364-2111

LINN, BERNARD SIMPSON GP /GS 006
RT. #1, BOX 172 A RT
BANNER ELK 28604 704 898-6201

LINS, MARK DAVID 034
924 SHOBER ST. S
WINSTON-SALEM 27101 919 725-8423

LINTON, EUGENE BELL OBG 034
112 BENT ST., BOX 742 AC
BERMUDA RUN 27006 919 765-9350

LINZ, WALTER JOSEPH 034
2318 ROSEWOOD AVE. S
WINSTON-SALEM 27103 919 773-1566

LIPFORD, EDWARD HOLDMAN, III PTH 060
CAROLINAS MED. CTR., C
P.O. BOX 32861
CHARLOTTE 28232 704 355-3467

LIPHAM, HARRY GLENN PUD 044
102 HOSITAL DR. AC
CLYDE 28721 704 452-0331

LIPTON, BARBARA STEINER P 032
919--109TH AVE., NE, APT. 1204 A L/RT
BELLEVUE, WA 98004 206 646-3882

LIPTZIN, MYRON BENNETT P 032
UNC STUDENT HEALTH SERVICE AC
BOX 7470
CHAPEL HILL 27599 919 966-3658

LITTLE, ALFRED BOYD CD /IM 041
1016 N. ELM ST. AC
GREENSBORO 27401 919 272-6153

LITTLE, DONALD FORREST OBG 060
1718 E. 4TH ST., #601 AC
CHARLOTTE 28204 704 372-8750

LITTLE, DOUGLAS JONATHAN IM /CD 053
136-A CARBONTON ROAD AC
SANFORD 27330 919 776-0719

LITTLE, EDGAR WATSON PD 041
1307 W. WENDOVER AVE. AC
GREENSBORO 27408 919 275-8621

LITTLE, EDWIN PAUL FP 054
P. O. BOX 415 AC
PINK HILL 28572 919 568-4111

LITTLE, HENRY REECE, JR. FP 025
800 HOSPITAL DRIVE A L/RT
NEW BERN 28560 919 637-6118

LITTLE, JOHN MONROE, JR. FP /GER 060
PO BOX 32861 A AC
CHARLOTTE 28232 704 355-5219

LITTLE, KEVIN L. FP 041
603 DOLLY MADISON RD. AC
GREENSBORO 27410 919 294-6190

LITTLE, LONNIE MARCUS GP 049
828 WOODLAND RD. A L/RT
STATESVILLE 28677 704 873-7442

LITTLE, ROBERT WINFIELD PD 001
2505 S. MEBANE ST. AC
BURLINGTON 27215 919 222-0291

LITTLE, SUZANNE BROWN IM /CD 025
800 HOSPITAL DRIVE AC
NEW BERN 28560 919 637-6118

LITTLE, WILLIAM C. CD 034
300 S. HAWTHORNE RD. AC
DIV. OF CARDIOLOGY
WINSTON-SALEM 27103 919 748-4342

LITTLEJOHN, JAMES TALMADGE IM /CD 011
6 FAIRWAY PL. L/RT
ASHEVILLE 28803

LITTLEJOHN, MARK HAYS R /NM 006
CANNON MEMORIAL HOSPITAL A AC
BANNER ELK 28604 704 898-5823

LITTLEJOHN, THOMAS WILLARD OBG /OBS 034
3098 TRENWEST DR. #A AC
WINSTON-SALEM 27103 919 768-0684

LITTLEJOHN, THOMAS WILLARD,III FP 034
2805 LYNDHURST AVENUE AC
WINSTON-SALEM 27103 919 768-8890
FAX 919 659-1609

LITTLETON, ROBERT ELTON OBG 092
3622 HAWORTH DR. AC
RALEIGH 27609 919 782-1273

LITZENBERGER, W. A. DREW NPM /PD 011
304-M DOCTOR'S BLDG. AC
ASHEVILLE 28801 704 253-1998

LIU, AMY WEN 034
434 S. FACTORY ROW S
WINSTON-SALEM 27101 805 964-6044

LIVERMAN, HENRY JOSEPH FP 007
P. O. BOX 218, LAZY LANE AC
ENGELHARD 27824 919 925-3271

LIVERMAN, JOSEPH THOMAS FP 064
111 W. CHURCH STREET A AC
NASHVILLE 27856 919 459-4012

LIVERMAN, JOSEPH THOMAS, JR. FP 051
706 WILKINS STREET AC
SMITHFIELD 27577 919 934-5149

LIVINGSTON, ELIZABETH G. OBG /OBS 032
7323 MATTHEWS RD. R
DURHAM 27712 919 471-3921

LIVINGSTON, MICHAEL BALFOUR IM 060
125 BALDWIN AVE. A AC
CHARLOTTE 28204 704 338-6300

LIVINGSTON, NANCY T. P /PYA 032
500 EASTOWNE DR. AC
CHAPEL HILL 27514 919 493-3597

LJUNG, MARTHA LEE 074
1121 TREYBROOKE CIR. S
GREENVILLE 27834 919 830-3801

LLEWELLYN, CHARLES E., JR. P 032
3308 CHAPEL HILL BLVD. #110 A P AC
DURHAM 27707 919 493-7298

LLOYD, CLARENCE DR 041
4503 BROOKHAVEN DR. AC
GREENSBORO 27406 919 275-9741

LOBACH, MARY LEE HOWELL OBG 032
4415 VALLEY FORGE RD. AC
DURHAM 27705 919 471-2571

LOCKE, CHARLES JOHN GS 010
PO BOX 6069 A P C
SHALLOTTE 28459 919 754-9465
FAX 919 754-4664

LOCKERT, CHARLES RAY ORS 080
102 MOCKSVILLE AVENUE A AC
SALISBURY 28144 704 638-0616

LOCKHART, DAVID ARMISTEAD PD 013
40 ARDSLEY AVENUE, N.E. AC
CONCORD 28025 704 786-1144

LOCKLEAR, JIMMY CD /IM 092
3320 OLD WAKE FOREST RD. AC
PO BOX 18700
RALEIGH 27609 919 872-4850

LOCKWOOD, MARILYN ANN PD /GP 041
C/O KRON MEDICAL CORP A AC
725 AIRPORT ROAD
CHAPEL HILL 27514 800 633-4225

LODA, FRANK A. PD /ID 032
CTR. FOR EARLY ADOLESCENCE AC
CARR MILL MALL, STE. 211
CARRBORO 27510 919 966-2504

LOEHR, STEPHEN PETER 034
2 MORIAH HILL RD. S
DURHAM 27707 919 489-6474

LOEHR, WALTER JOSEPH GS 032
2609 N. DUKE ST., STE. 402 A AC
DURHAM 27704 919 471-8439
FAX 919 477-5184

LOFTUS, JAMES MORGAN, JR. ORS 013
PO BOX 1606 A AC
CONCORD 28026 704 788-3155
FAX 704 788-3487

LOGAN, WILLIAM C., JR. 032
600 AUDUBON LAKE DR. A * S
BLDG. #1, B-31
DURHAM 27713 919 544-7428

LOGAN, WILLIAM SUMNER D 060
1350 S. KINGS DRIVE AC
CHARLOTTE 28207 704 372-8750

LOGEL, ROBERT JOHN ORS 026
3308 MELROSE ROAD A AC
FAYETTEVILLE 28305 919 484-3114

LOGGIE, BRIAN WM. GS /ON 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-6272

LOGUE, STEPHEN STUART IM 026
1766 METROMEDICAL DR. AC
FAYETTEVILLE 28304 919 483-8080

LOHAVICHAN, CHOOMSANG NEP /IM 026
PO BOX 42736 A AC
FAYETTEVILLE 28304 919 323-1315

LOHAVICHAN, VIRAT CD /IM 026
1314 MEDICAL DR., #101 AC
FAYETTEVILLE 28304 919 323-1315

LOHR, DERMOT PH 029
20 VANCE CIRCLE A L/RT
LEXINGTON 27292 704 246-2626

LOHR, KATHRYN MARY OBG 032
3108 STANFORD DR. R
DURHAM 27707 919 490-4477

LOHR, LLOYD DERMOT OBG 029
7 MEDICAL PARK DRIVE A AC
LEXINGTON 27292 704 243-2431

LOMAX, CHARLES WESTON OBG 041
510 N. ELAM AVE., STE. 301 AC
GREENSBORO 27403 919 299-8020

LOMAX, DONALD HENRY FP 080
1710 W. INNES ST. A AC
KETNER CENTER
SALISBURY 28144 704 636-5626

LOMBARD, R. ELIZABETH FP 080
P. O. BOX 457 A AC
ROCKWELL 28138 704 279-7227

LOMBARDI, VINCENT A. P 060
1900 RANDOLPH RD. STE. 900 A AC
CHARLOTTE 28207 704 333-7722

LONDON, DEBORAH LOUISE 074
RT. #2, BOX 561-D A S
AYDEN 28513 919 752-0109

LONDON, HOWARD B. OPH 041
1511 WESTOVER TERR. AC
GREENSBORO 27408 919 378-1632

LONDON, WILLIAM LORD PD /PHO 032
2609 N. DUKE ST.,STE 801 A AC
DURHAM 27704 919 477-3434

LONG, CAROL ANN PD 011
131 MCDOWELL ST. AC
ASHEVILLE 28801 704 254-4337

LONG, CATHY ROMINE AN 056
70 JONES CREEK RD. AC
FRANKLIN 28734 704 524-9026

LONG, CLIFFORD JAMES OBG 063
P. O. BOX 2000 A P AC
PINEHURST 28374 919 295-0286

LONG, EUGENE MONROE, II OBG /OBS 001
KERNODLE CLINIC A AC
BURLINGTON 27217 919 226-2423

LONG, FRANK EDWARD OBG 013
1054 BURRAGE ROAD, N. E. A AC
CONCORD 28025 704 788-4151

LONG, FRED JOSEPH, JR. GS 092
PO BOX 14445 A AC
RALEIGH 27620 919 821-5771

LONG, JIM T., JR. AN 056
70 JONES CREEK RD. AC
FRANKLIN 28734 704 524-9026

LONG, JOHN CLAYTON D 034
1401-C OLD MILL CIRCLE A AC
WINSTON-SALEM 27103 919 765-8121

LONG, PAUL DEMARS ORS 041
1505 WESTOVER TERR. A AC
GREENSBORO 27408 919 275-0927

LONG, RONALD MORGAN AN 096
1717 W. NEW HOPE RD. A AC
GOLDSBORO 27530

LONG, STEPHEN N. IM 073
PO BOX 1058 A AC
ROXBORO 27573 919 599-3212

LONG, THOMAS DRUMWRIGHT IM 073
PO BOX 1058 A AC
ROXBORO 27573 919 599-3212

LONG, THOMAS THERON, III GE /IM 013
920 N. CHURCH STREET A P AC
CONCORD 28025 704 788-4186

LONG, WALTER NATHANIEL, JR. FP 002
505 THIRD AVENUE, SW AC
TAYLORSVILLE 28681 704 632-9736

LONG, WILLIAM EVERETT FP 018
P. O. BOX 1239 A AC
CONOVER 28613 704 464-3821

LONG, WILLIAM JOSEPH FP /GER 060
402 E. SUGAR CREEK RD. AC
CHARLOTTE 28213 704 596-0822

LONGINO, FRANK HENRY GS /TS 074
1914 FOREST HILL DR. A L/RT
GREENVILLE 27834 919 758-1747

LONON, ROBERT WARREN, JR. AN 041
5501 WESTFIELD DR. AC
GREENSBORO 27410 919 373-8555

LOOMER, LANCE IM /ON 096
203 COX BLVD. AC
GOLDSBORO 27534 919 734-9455

LOOMIS, RALPH CHARLES NS 011
7 MCDOWELL STREET A AC
ASHEVILLE 28801 704 255-7776

LOPES, C. DEJESUS GS /GP 009
P. O. BOX 1358 A AC
ELIZABETHTOWN 28337 919 862-3112

LOPEZ, JUAN ALBERT 034
2270 SUNDERLAND RD. #11A R
WINSTON-SALEM 27103 919 748-2011

LORE, RALPH ELI GS 014
306 PENNTON AVENUE, S.W. A L/RT
LENOIR 28645 704 754-7356

LOUGHLIN, HOWARD HOPKINS PD 026
1213 WALTER REED ROAD AC
FAYETTEVILLE 28304 919 484-6121

LOUK, DOUGLAS K. OBG 083
507 W. COVINGTON ST. A AC
PO BOX 1808
LAURINBURG 28352 919 276-4432

LOVE, DAVID EUGENE OBG 045
513 N. JUSTICE ST. A AC
HENDERSONVILLE 28739 704 687-0122

LOVE, HARRY MORROW PIERCE ORS 075
785 PALMER ROAD A P C
MILL SPRING 28756 404 255-1933

LOVE, JAMES MCLEAN N /IM 041
2007 LAFAYETTE DRIVE A AC
GREENSBORO 27408 919 275-0779

LOVEJOY, STEVEN ARNET ORS 060
120 PROVIDENCE RD. A AC
CHARLOTTE 28207 704 372-0743

LOVETT, JOHN WILSON U 065
1905 GLEN MEADE RD. A * AC
WILMINGTON 28403 919 763-6251

LOVETTE, KENNETH MAURICE OBG 033
TARBORO CLINIC AC
TARBORO 27886 919 343-0161

LOVIN, VICKIE WEST OBG 018
RT. #2, BOX 195 AC
CONOVER 28613 704 322-4920

LOWDER, STEPHEN CARLTON END /IM 034
3310 BROOKVIEW HILLS BLVD. AC
SUITE 202
WINSTON-SALEM 27103 919 765-0020

LOWE, BARBARA ANN IM 043
705 TILGHMAN DR. A AC
DUNN 28334 919 000-0000

LOWE, JAMES EDWARD CDS /TS 032
BOX 3954, DUMC A AC
DURHAM 27710 919 684-3235

LOWE, STEPHEN BECHTLER ORS /HS 034
SALEM ORTHOPAEDIC ASSOC. PA A AC
PO BOX 25007
WINSTON-SALEM 27114 919 768-1270

LOWERY, RUSSELL C., III GS /VS 067
ONSLOW SURGICAL CLINIC AC
200 DOCTORS DR. STE. L
JACKSONVILLE 28540 919 577-1228

LOWNES, HOLLY EICHELBERGER FP 078
119 FLORENCE ST. AC
MAXTON 28364 919 844-5253

LOWNES, MILTON MARKLEY, JR. GP 096
PO BOX 188 L/RT
DUDLEY 28333 919 658-2505

LOWNES, ROBERT LEFONIA, SR. IM 078
202 DUART RD. AC
LUMBERTON 28358 919 671-5032

LOWRY, BRIAN PATRICK 074
3206 BRASSWOOD CT. APT. #3 A S
GREENVILLE 27834 919 355-1772

LOWRY, OTIS MEGEL FP 064
SPRING HOPE CLINIC AC
PO BOX 1090
SPRING HOPE 27882 919 478-5344

LOWRY, R. FRANK OPH 092
4024 BARRETT DR., STE. 104 A AC
RALEIGH 27609 919 787-3241

LOWRY, R. TEMPEST EM 064
4500 FOX CT. A M
FAYETTEVILLE 28314 919 867-0064
FAX 919 867-0064

LUCAS, JACK A. OBG 060
449 N. WENDOVER RD. AC
CHARLOTTE 28211 704 364-3760
FAX 704 365-3221

LUCAS, KATHLEEN ELLEN PD 041
1307 W. WENDOVER AVE. AC
GREENSBORO 27401 919 272-2030

LUCAS, ROBERT THEODORE, JR. PD 060
1350 KINGS DRIVE AC
CHARLOTTE 28207 704 342-8200

LUCEY, DONALD TRUESDELL U 092
2800 BLUE RIDGE BLVD. STE. 403 A AC
RALEIGH 27607 919 781-7113

LUND, HERBERT ZACHAREUS PTH /D 041
1200 N. ELM ST. A L
GREENSBORO 27401 919 379-4074

LUND, JOHN JEFFERSON CD /IM 098
1700 S. TARBORO ST. A AC
WILSON 27893 919 399-2272

LUPO, SUSAN ELIZABETH AN /IM 060
1400 LINDA LANE A AC
CHARLOTTE 28211

LUPSE, RAYMOND MORRIS GYN 036
603 COX ROAD A AC
GASTONIA 28054 704 866-0111

LUPTON, CARROLL CRESCENT CRS 041
3300 STARMOUNT DRIVE A L/RT
GREENSBORO 27403 919 299-9255

LUPTON, EMMETT STEVENSON D 041
P. O. BOX 177 A L/RT
ALAMANCE 27201 919 228-1288

LUPTON, FREDERICK ARTHUR, III D 041
1301 W. WENDOVER AVE. A AC
GREENSBORO 27408 919 272-3152

LURIE, SCOTT NORD 032
1711 SHAWNEE ST. A R
DURHAM 27701 919 682-0582

LUSK, JOHN ALEXANDER, III ON /IM 041
301 E. WENDOVER AVE., STE. 300 A * AC
GREENSBORO 27401 919 272-2141

LUTMAN, GEORGE BENTON PTH 026
P. O. BOX 2000 A AC
FAYETTEVILLE 28302 919 323-6149

LUTTERLOH, ISAAC HAYDEN, JR. IM 053
1817 CARTHAGE ST. * RT
SANFORD 27330 919 775-3911

LUTZ, CHARLES LARRY IM /GE 014
P. O. BOX 1020 AC
LENOIR 28645 704 758-5544

LUTZ, JAMES DWIGHT AN 045
235 ESTATE DR. L/RT
HENDERSONVILLE 28739 704 693-9669

LUVIS, L.D.A. CLAUDIUS IM 036
1018 HEATHERLOCH DR. AC
GASTONIA 28054 704 867-1306

LUYANDO, YVONNE FP 092
171 SPRINGBERRY LANE C
CHAPEL HILL 27514 919 881-5360

LYDAY, WILLIAM DAVIE TS /GS 060
225 HAWTHORNE LN., STE. 301 A AC
CHARLOTTE 28204 704 377-5978

LYKENS, MICHAEL GORDON IM /PUD 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-4322

LYKINS, KIMBERLY GLENN FP 084
320 YADKIN ST. AC
ALBEMARLE 28001 704 982-9144

LYLE, CARL BLACKBURN, JR. IM 032
5039 OLD CLINIC BLDG. AC
UNC CB #7110
CHAPEL HILL 27599 919 966-2276
FAX 919 966-6923

LYLES, EVELYN MCMASTER OBG 011
93 VICTORIA ROAD A AC
ASHEVILLE 28801 704 253-4821

LYLES, MARY FENNELL IM /GER 034
300 S. HAWTHORNE ROAD AC
WINSTON-SALEM 27103 919 748-2051

LYMAN, DAVID J. FP 074
DEPT. OF FAMILY MEDICINE A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4611

LYMBERIS, MARVIN NICHOLAS OPH 060
2514 RED FOX TRAIL A L/RT
CHARLOTTE 28211 704 366-6227

LYNCH, JOHN FRANKLIN, JR. PD 040
905 ARBORDALE DR. A L/RT
HIGH POINT 27262 919 886-4049

LYNCH, SUE ANN N 032
18707 BARN SWALLOW TERR. R
GAITHERSBURG, MD 20879

LYNN, ARTHUR SIMONTON, JR. IM /CD 018
ROUTE #2, BOX 199 * AC
CONOVER 28613 704 322-1128

LYON-SMITH, MARY E. FP 003
616 DOCTOR'S STREET AC
SPARTA 28675 919 372-5606

LYSKO, JANE E. PTH 011
ST. JOSEPH'S HOSPITAL A AC
DEPT. OF PATHOLOGY
ASHEVILLE 28801 704 255-3949

MABE, PAUL ALEXANDER, JR. FP 079
1123 S. MAIN STREET AC
REIDSVILLE 27320 919 342-4286

MABRY, EDWARD BLOXTON OBG 041
1305 W. WENDOVER AVENUE A AC
GREENSBORO 27408 919 274-6355

MABRY, FREDERICK HARRISON, JR. PD 083
418 KING STREET AC
LAURINBURG 28352 919 276-7570

MAC, HARJIT BALA PM 084
P. O. BOX 1230 A AC
ALBEMARLE 28002 704 983-3314

MAC, SURENDRAPAL SINGH ORS /HS 084
P. O. BOX 1230 A AC
ALBEMARLE 28001 704 983-3314

MACALPINE, ORVILLE DUNCAN PD 011
98 HOLLY HILL DR. A L/RT
CANDLER 28715 704 667-5553

MACARTHUR, ROBERT DOUGLAS, JR. 034
2359-C QUEEN ST. S
WINSTON-SALEM 27103 919 723-4528

MACAULAY, ROBERT JOSEPH, JR. U 064
180 FOY DR. AC
ROCKY MOUNT 27804 919 443-3136

MACCIOLI, GERALD A. AN /CCM 092
2800 BLUE RIDGE RD. STE. 204 A AC
RALEIGH 27607 919 783-3034

MACDONALD, DONALD EWAN P 090
1623 E. SUNSET DR. AC
MONROE 28110 704 289-5431

MACDONALD, HENRY JOHN, JR. OTO 025
PO BOX 2406 A AC
709 PROFESSIONAL DR.
NEW BERN 28560

MACDONALD, JOEL DOUGLAS 060
2629 STRINGHAM AVE. #B-114 R
SALT LAKE CITY, UT 84109

MACDONALD, KENNETH G., JR. GS /ABS 074
DEPT. OF SURGERY A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4171

MACDONALD, WILLIAM WEBSTER OBG 060
1023 EDGEHILL DRIVE A AC
CHARLOTTE 28207 704 373-1541
FAX 704 334-9480

MACEDO, NELSON T. NS 064
2416 PROFESSIONAL DR. AC
PO BOX 7546
ROCKY MOUNT 27804 919 443-4563

MACFARLAND, JOSEPH ALFRED GP 032
UNC STUDENT HEALTH SERVICE AC
CAMPUS BOX 7470
CHAPEL HILL 27599 919 966-2281

MACGREGOR, DREW ALAN 034
3601 BAY MEADOW CT. R
WINSTON-SALEM 27106 919 748-6533

MACHEMER, CHRISTINE ANNA P 032
BOX 3125, DUMC AC
DURHAM 27710 919 684-5772

MACHEMER, ROBERT OPH 032
BOX 3802, DUMC A AC
DURHAM 27710 919 684-5846
FAX 919 684-2230

MACINTOSH, VICTOR HENRY FP 053
207 E. MAIN ST. * AC
SANFORD 27330 919 774-6282

MACK, RONALD BRIAN PD 034
2516 WOODBERRY DRIVE AC
WINSTON-SALEM 27106 919 727-8108

MACKAY, JAMES CALVIN IM /PUD 065
302 W. RENOVAH CR. L/RT
WILMINGTON 28403 919 762-1529

MACKEL, DAVID FREDERICK ORS 045
1027 FLEMING STREET AC
HENDERSONVILLE 28739 704 692-5781

MACLAUCHLIN, WILLIAM THOMPSON FP 018
237 8TH ST. NW A L/RT
CONOVER 28613 704 464-2170

MACMURDO, SCOTT ANDERSON 034
2035 W. ACADEMY ST. A S
WINSTON-SALEM 27103 919 584-8795

MACQUEEN, DONALD MILES A /PD 065
2321 DELANEY AVENUE A P AC
WILMINGTON 28403 919 763-1661

MACRAE, JOHN DONALD R 026
700 MEASE PLAZA, APT. 850 A L/RT
DUNEDIN, FL 34698 813 733-1161

MACRI, ANTHONY JOHN PTH 079
424 DOGWOOD DR. A AC
EDEN 27288 919 623-9711

MADDOX, CHARLES DEATON IM 011
4-B DOCTOR'S PARK A AC
ASHEVILLE 28801 704 253-2865
FAX 704 253-9694

MADDOX, THOMAS WILBUR GS /VS 092
PO BOX 32090 AC
2800 BLUE RIDGE ROAD
RALEIGH 27622 919 781-0710

MADRY, HERBERT RAYMOND, JR. DR 092
2105 WHITE OAK ROAD A P AC
RALEIGH 27608 919 833-9838

MAGARELLI, PAUL C. 032
BOX 3495, DUMC A R
DURHAM 27710 919 688-3034

MAGOLAN, JEROME JOSEPH, JR. OPH 092
3320 EXECUTIVE DR., STE. 210 A AC
RALEIGH 27609 919 872-0572

MAGRINAT, GUSTAV CHARLES 032
BOX 3206, DUMC R
DURHAM 27710 919 684-8111

MAHALEY, MOSES STEPHEN, JR. NS 044
PO BOX 1063 RT
MAGGIE VALLEY 28751 704 926-6313

MAHANEY, JOHN PHILIP, JR. FP 025
810 KENNEDY AVE. A * AC
NEW BERN 28560 919 633-1678

MAHARAJH, GARNET D. PD 044
102 HOSPITAL DR. AC
CLYDE 28721 704 242-2211

MAHMUD, REHAN 074
DEPT. OF CARDIOLOGY AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-5395
FAX 919 551-5884

MAHORNEY, STEVEN LOUIS P 011
HIGHLAND HOSPITAL A AC
ASHEVILLE 28801 704 254-3201

MAIER, LISA ANN 032
4800 UNIVERSITY DR. APT. 3-M S
DURHAM 27707 919 490-4988

MAITLAND, ALEXANDER, III U 011
1 DOCTOR'S PARK A AC
ASHEVILLE 28801 704 253-5314

MAJORS, ROBERT POWELL, JR. OTO 092
3010 ANDERSON DR. AC
PO BOX 18946
RALEIGH 27619 919 787-7171
FAX 919 787-6427

MAJSTORAVICH, JOSEPH, JR. OPH 016
P. O. BOX 1317 AC
MOREHEAD CITY 28557 919 726-0411

MAKWANA, GIRISH N. AN 088
107 GLEN CANNON DR. A AC
PISGAH FOREST 28768 704 884-9111

MALEKPOUR, BAHMAN P 096
2805 MCLAMB PL. A AC
PO BOX 1342
GOLDSBORO 27533 919 734-2222

MALLON, WILLIAM JAMES ORS 032
2609 N. DUKE ST. A P C
DURHAM 27705 919 220-5255

MALLONEE, MICHAEL STEVEN OTO /HNS 060
8736 UNIVERISYT CITY BLVD. A AC
UNIVERSITY HEAD & NECK, PA
CHARLOTTE 28213 704 547-1609

MALLOY, H. REMBERT GS 034
2020 NEW WALKERTOWN ROAD A L/RT
WINSTON-SALEM 27101 919 723-3729

MALONE, JOHN HUGH, JR. IM 013
56 ARDSLEY AVENUE, N.E. AC
CONCORD 28025 704 782-1101

MALONEY, EUGENE DOUGLAS P /EM 036
1249 HOFFMAN RD. * AC
GASTONIA 28054 704 866-0042

MALONEY, SEAN ROBERT PM 011
445 BILTMORE AVE. STE. 106 A AC
ASHEVILLE 28801 704 254-9796

MALONEY, THOMAS RICHARD GER /IM 092
1111 LUPINE CT., APT. B A RT
RALEIGH 27606 919 233-9267

MALOY, THOMAS HOWARD OPH 065
2310 DELANEY AVENUE A AC
WILMINGTON 28401 919 763-3664

MALTBIE, ALLAN ARMSTRONG P /PYA 032
BOX 3837, DUMC AC
DURHAM 27710 919 684-5217

MALTON, MARK L. OPH 060
8730 UNIVERSITY CITY BLVD. A AC
CHARLOTTE 28213 704 334-2020
FAX 704 334-6073

MANCUSI-UNGARO, PETER CURT HEM /ON 065
2131 S. SEVENTEENTH STREET AC
WILMINGTON 28401 919 343-0161
FAX 919 343-7643

MANDEL, DALE MASON GS /TRS 029
105 PINEYWOOD RD. BOX 1187 A * AC
THOMASVILLE 27360 919 475-7148

MANDEL, LEE RICHARD IM 040
707-E W. MAIN ST. A AC
PO BOX 2098
JAMESTOWN 27282 919 454-3151

MANDEL, STANLEY ROBERT GS /TS 032
UNC, DEPT. OF SURGERY 229H A AC
CHAPEL HILL 27599 919 966-3391
FAX 919 966-7564

MANESS, ARCHIBALD KELLY, JR. OBG 041
301 E. WENDOVER AVE. A AC
GREENSBORO 27401 919 273-2835
FAX 919 274-4594

MANESS, PAUL FRANKLIN PD 001
328 W. DAVIS STREET A * L
BURLINGTON 27215 919 228-8341

MANESS, RUBIN FRANKLIN PD /A 096
2706 MEDICAL OFFICE PLACE AC
GOLDSBORO 27534 919 734-4736

MANGANO, CHARLES ANGELO, JR. CD /IM 092
3020 NEW BERN AVE. STE. 420 A AC
RALEIGH 27610 919 231-6132

MANGE, STEPHEN KENNEDY PD 060
PO BOX 1570 AC
DAVIDSON 28036 704 892-7905
FAX 704 892-3889

MANGEL, ALLEN WAYNE 032
534 FINLEY ST. A R
DURHAM 27705 919 383-9730

MANGUM, ADDISON GOODLOE R 084
P. O. BOX 1258 AC
ALBEMARLE 28002 704 982-5319

MANGUM, CARLYLE THOMAS, JR. GP 056
P. O. BOX 429 L/RT
HIGHLANDS 28741 704 526-2125

MANGUM, GARY LIONELL ORS 023
202 E. GROVER ST. A AC
SHELBY 28150 704 482-7311

MANGUM, JOHN ROWLAND FP 053
555 CARTHAGE ST. A * AC
SANFORD 27330 919 774-6518

MANGUM, RICHARD ARNOLD FP 039
PO BOX 706 A AC
CREEDMOOR 27522 919 528-0707

MANGUM, SARAH ROSE 074
203 GARNER RD. S
GREENVILLE 27834 919 756-5753

MANKTELOW, ANNE GS 032
1705-A ALLARD ROAD A R
CHAPEL HILL 27514 919 966-4131

MANLAPAS, HECTOR CHAN IM 042
PO DRAWER 158 A AC
ROANOKE RAPIDS 27870 919 537-0135

MANLEY, JAMES JOSEPH FP /EM 025
800 HOSPITAL DR. STE. #6 AC
PO BOX 2585
NEW BERN 28561 919 637-6193

MANLY, DAVID TUPPER P 074
115 ROSEMOND DR. AC
GREENVILLE 27834 919 758-4062

MANLY, ISAAC VAUGHN GS /TS 092
2800 BLUE RIDGE BLVD. AC
SUITE 305-1
RALEIGH 27607 919 781-7410

MANN, CHARLES HAYES OTO 032
3938 DOVER ROAD A AC
DURHAM 27707 919 682-9341

MANN, ELIZABETH SPRAGUE AN 032
UNC, DEPT. OF ANES., CB 7010 A C
223 BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-5136

MANN, JAMES TIFT, III CD 092
WAKE HEART ASSOCIATES AC
PO BOX 14427
RALEIGH 27620 919 832-9253

MANN, JOHN DOUGLAS N /IM 032
751 CLINICAL SCI. BLDG. 229-H A AC
UNC SCHOOL OF MEDICINE
CHAPEL HILL 27599 919 966-2526

MANN, LARRY DOUGLAS PD 092
3803-A COMPUTER DR. AC
RALEIGH 27609 919 782-5273

MANN, PHILIP ROGERS FP /IM 001
803 HERMITAGE ROAD A AC
BURLINGTON 27215 919 227-3643

MANN, RICHARD HARVEY PUD 074
DEPT. OF MED/PULMONARY DIV. AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4653

MANNING, ISAAC HALL, JR. IM 032
3901 HOPE VALLEY RD. A L/RT
DURHAM 27707 919 489-2298

MANNING, STUART HALL IM 032
2609 N. DUKE ST., STE. 604 A AC
CENTRAL MEDICAL PARK
DURHAM 27704 919 220-5515

MANNINO, JOE A. 032
305 WESTBROOK DR. S
CARRBORO 27510

074
1535 TREYBROOKE CIR. A S
GREENVILLE 27834 919 830-4061

MARBURG, KENNETH CHARLES EM /FP 065
PO BOX 3886 AC
WILMINGTON 28406 919 791-0075

MARCHESE, JOHN RICHARD OBG 095
40 DOCTORS DR. AC
BOONE 28607 704 264-9067

MARCHETTI, LOUIS JOSEPH U 063
MIDSOUTH UROLOGY CTR., PA * AC
TWO MEMORIAL DR.
PINEHURST 28374 919 295-6782

MARCOTTE, DAVID BACON P 026
1262 OLIVER ST. AC
FAYETTEVILLE 28304 919 484-5151

MARCUARD, STEFANO P. GE /IM 074
DEPT. OF MEDICINE AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4652

MARCUS, LEONARD JEFFREY 032
309 BARCLAY RD. R
CHAPEL HILL 27516 919 967-9403

MARCUS, RICHARD WM. N 018
600 FIRST PLAZA A P AC
1985 TATE BLVD. SE
HICKORY 28602 704 328-5500

MARGOLIS, JEFFREY ALAN IM 079
PO BOX 2036 A C
EDEN 27288 919 627-4896

MARGOLIS, JUDITH OLSHANSKY AN 032
1805 PATHWAY DR. C
CARRBORO 27510 919 966-5131

MARGOLIS, PETER ADAM 032
UNC, DIV. OF COMM. PEDIATRICS C
WING D, CB #7225
CHAPEL HILL 27599 919 966-2504
FAX 919 966-5830

MARION, JEREMIAH RICHARD, III OPH 034
631 COLISEUM DR. A P AC
WINSTON-SALEM 27106 919 723-1041

MARKELLO, JAMES ROSS PD 074
DEPT. OF PEDIATRICS AC
ECU SCHOOL OF MEDICINE
GREENVILLE NC 27858 919 551-2539

MARKHAM, ROBERT WADE D 040
624 QUAKER LANE, SUITE 302-B A * AC
HIGH POINT 27262 919 887-3195

MARKS, EDGAR SEYMOUR IM 041
5-B FOUNTAIN MANOR DR. A S/RT
GREENSBORO 27405 919 378-9906

MARKS, HOWARD F., JR. GS /VS 065
1501 MEDICAL CENTER DR. A AC
WILMINGTON 28401 919 763-6289

MARKS, JOHN JACOB GYN 092
5512 HAWTHORNE PARK AC
RALEIGH 27613 919 848-1990

MARKS, MALCOLM W. PS 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4172
FAX 919 748-6642

MARKWORTH, JAMES WARREN ORS 065
1222 MEDICAL CENTER DRIVE A AC
WILMINGTON 28401 919 763-2977

MARLETTE, MARNIE STONE 034
1651-G NORTHWEST BLVD. S
WINSTON-SALEM 27104 919 761-0433

MARLOWE, DONNA M. 034
805 W. END BLVD. APT. B-4 A S
WINSTON-SALEM 27101 919 727-1866

MARLOWE, JAMES MANNING ORS 040
624 QUAKER LANE, SUITE D-200 P AC
HIGH POINT 27262 919 841-6262

MARQUEZ, PATERNO RIEGO FP 064
107 NASH MEDICAL ARTS MALL AC
ROCKY MOUNT 27804 919 443-8810

MARR, ALBERT WOODALL 034
1101 W. FOURTH ST. A S
WINSTON-SALEM 27101 919 721-1662

MARROUM, MARIE-CLAIRE PTH 060
PO BOX 32861 A P AC
CAROLINAS MEDICAL CENTER
CHARLOTTE 28232 704 355-2251

MARROW, HENRY GREGORY PTH 063
PO BOX 3000 A AC
MOORE REGIONAL HOSPITAL
PINEHURST 28374 FAX 919 295-7878

MARSDEN, MARGARET E. FERRITER IM 041
3102 BEACONWOOD DR. R
GREENSBORO 27405 919 489-8433

MARSH, FRANK BAKER IM 080
725 LAKE DRIVE A L/RT
SALISBURY 28144 704 633-2344

MARSHALL, BERNARD ANTHONY OBG 041
P. O. BOX 21922 AC
GREENSBORO 27406

MARSHALL, CHARLES FOSTER, JR. OPH 060
1718 E. 4TH ST. #208 AC
CHARLOTTE 28204 704 376-6511

MARSHALL, DIANE DUVALL 034
228 OAKWOOD COURT S
WINSTON-SALEM 27103 919 724-1815

MARSHALL, HARVEY E., III 034
228 OAKWOOD CT. S
WINSTON-SALEM 27103 919 724-1815

MARSHALL, RICHARD BLAIR PTH 034
236 STANAFORD ROAD A AC
WINSTON-SALEM 27104 919 748-2626

MARSHBURN, ELISHA THOMAS, JR. IM 065
1906 MEETING COURT A P AC
WILMINGTON 28401 919 762-9621

MARSICANO, THOMAS H. CDS /VS 032
4125 BEN FRANKLIN BLVD.STE.100 C
DURHAM 27704 919 471-9332

MARSIGLI, ADOLFO HECTOR ORS /HS 064
110 NASH MEDICAL ARTS MALL A AC
ROCKY MOUNT 27801 919 443-8830

MARSIGLI, EDUARDO OSCAR ORS 064
110 NASH MEDICAL ARTS MALL A AC
ROCKY MOUNT 27801 919 443-8830

MARSTON, CHARLES THOMAS, JR. PD 081
117 TRYON ROAD AC
RUTHERFORDTON 28139 704 286-9049

MARTIN, ANN MICHELE 074
103 ADAMS BLVD. A S
GREENVILLE 27858 919 830-3914

MARTIN, CHARLES R. PD 067
120 MEMORIAL DRIVE A AC
JACKSONVILLE 28540 919 353-0581

MARTIN, DAVID FARRA IM /GE 063
205 PAGE RD. AC
PINEHURST 28374 919 295-5511

MARTIN, DAVID FRANKLIN ORS 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4207
FAX 919 748-6286

MARTIN, DENNIS KEITH OBG 025
903 PINETREE DRIVE AC
NEW BERN 28560 919 633-4005

MARTIN, DENNIS LEE N 011
7 MCDOWELL ST. A AC
ASHEVILLE 28801 704 255-7776

MARTIN, EDWARD STEPHENS PD 060
2711 RANDOLPH ROAD, SUITE 501 AC
CHARLOTTE 28207 704 374-1736

MARTIN, ERIC MEYER 034
2371-D FORSYTH CT. A S
WINSTON-SALEM 27103 919 724-6414

MARTIN, J. PAUL FP /ALD 011
491 BILTMORE AVE. AC
ASHEVILLE 28801 704 258-0670
FAX 704 258-2097

MARTIN, JAMES CICERO, JR. OTO 034
1420 PLAZA DR. AC
WINSTON-SALEM 27103 919 765-4922

MARTIN, JAMES FRANKLIN R /DR 034
2680-3 GROSVENOR PLACE A L
WINSTON-SALEM 27106 919 723-5199

MARTIN, MATTHEW BRUNSON GS 041
311 W. WENDOVER AVE. A * AC
GREENSBORO 27408 919 275-8415

MARTIN, PHILIP L. OPH 092
3320 EXECUTIVE DR., STE. 210 A AC
RALEIGH 27609 919 872-0572

MARTIN, RICHARD W. GS 080
327 MOCKSVILLE AVE. A P * AC
PO BOX 1665
SALISBURY 28144 704 637-2750
FAX 704 637-2752

MARTIN, ROBERT GALE OPH 063
2170 MIDLAND ROAD AC
SOUTHERN PINES 28387 919 295-2100
FAX 919 295-5339

MARTIN, SIDNEY ARNOLD OM /FP 092
3141 ESSEX CIRCLE A S/RT
RALEIGH 27608 919 782-0911

MARTIN, WELLS, III DR 040
HIGH POINT REGIONAL HOSPITAL AC
DEPT. OF RADIOLOGY
HIGH POINT 27260 919 884-6037

MARTIN, WILLIS ELWOOD D /IM 064
3136 SUNSET AVE. A AC
ROCKY MOUNT 27804 919 937-7111

MARTINEAU, SHEILA M. 032
BOX 2793, DUMC A S
DURHAM 27710 919 967-0163

MARTINEZ, JOSEPH C. EM 060
CAROLINAS MEDICAL CENTER AC
PO BOX 32861
CHARLOTTE 28232 704 355-3181

MARTINEZ, LUCAS J. NS 064
PO BOX 7546 AC
ROCKY MOUNT 27804 919 443-4563

MARTINEZ, MARIA D. PD 060
8806 BRASS BELL CT. A P C
CHARLOTTE 28227 704 548-5800

MARTINEZ, SALUTARIO R 032
DUMC, DEPT. OF RADIOLOGY A AC
DURHAM 27710 919 684-2711

MARTONE, ARLENE RAE OBG 050
201 ASHEVILLE HIGHWAY STE. 102 AC
SYLVA 28779 704 586-5865

MARUCHECK, JOHN THOMAS IM 092
6217 DRESDEN LANE AC
RALEIGH 27612 919 878-0900

MARX, HERMAN BENNO FP
APDO 30127 H
ZONA TONCONTIN

MARX, RICHARD SAMUEL ID/IM 034
3310 BROOKVIEW HILLS BLVD #204 AC
WINSTON-SALEM 27103 919 765-8420

MASIUS, WILLIAM GLENN 074
PITT COUNTY MEMORIAL HOSP. R
GREENVILLE 27835 919 752-5867

MASON, DAVID PENDLETON OBG 065
1809 GLEN MEADE ROAD A AC
WILMINGTON 28403 919 762-9807

MASON, ERIC W. AN /CC 092
PO BOX 18139 A AC
RALEIGH 27619 919 783-3034

MASON, JOHN CURRIE 032
1224 COUNTRY CLUB RD. A S
WILMINGTON 28403 919 762-1520

MASON, LOCKERT BEMISS GS 065
1224 COUNTRY CLUB RD. L/RT
WILMINGTON 28403 919 762-1520

MASON, THOMAS LEE 032
116-G SHADOWOOD DR. A S
CHAPEL HILL 27514 919 968-3287

MASON, WILLIAM TERRY ORS 080
400 MOCKSVILLE AVENUE A AC
SALISBURY 28144 704 633-6044

MASOUD, JAVED CD /IM 001
723 EDITH STREET AC
BURLINGTON 27215 919 229-6486

MASSAGEE, JAMES TERRILL AN 041
1600 INDEPENDENCE RD. A P AC
GREENSBORO 27401 919 299-6343

MASSAQUOI, ALFRED DADEE LAMIN OBG 039
1030 COLLEGE ST. AC
P. O. BOX 1513
OXFORD 27565 919 693-4212
FAX 919 690-1525

MASSENGILL, G.K. GS 092
3308 TIMBER LAKE ROAD A L/RT
RALEIGH 27604 919 872-6924

MASSENGILL, SUSAN FOSTER PD /PNP 000
7903 SW 47TH CT. A R
GAINESVILLE, FL 32608 904 371-6024

MASSEY, CHARLES CASWELL, JR. CRS 060
2015 RANDOLPH RD. STE. 201 A P AC
CHARLOTTE 28207 704 333-1259

MASSEY, MARGA FAITH 032
BOX 2894, DUMC S
DURHAM 27710

MASSEY, THOMAS NEELY, JR. CD /IM 060
217 TRAVIS AVENUE AC
CHARLOTTE 28204 704 372-3350

MASTERS, KIM JAMES P /CHP 011
APPALACHIAN HALL A AC
PO BOX 5534
ASHEVILLE 28813 704 253-3681

MASTERS, MICHAEL JASON D 044
108 HOSPITAL DR. AC
CLYDE 28721 704 456-7343

MASTRANGELO, MICHAEL ROCCO GE 065
1515 DOCTOR'S CIRCLE AC
WILMINGTON 28401 919 763-5182

MATHES, GORDON LAWRENCE, JR. U 064
180 FOY DR. A AC
ROCKY MOUNT 27804 919 443-3136
FAX 919 443-3847

MATHEWS, EMMETT C., JR. CD 060
1350 S. KINGS DR. AC
CHARLOTTE 28207 704 342-8070

MATHEWS, HERSCHELL F. FP /EM 044
ROUTE #1, BOX 564 AC
SYLVA 28779 704 586-8352

MATHEWS, RAYMOND M., JR. 034
2743 LONDON LANE A S
WINSTON-SALEM 27103 919 765-0802

MATHIAS, BRAD TRAFTON OTO 063
#1 MEMORIAL DR. A * AC
PINEHURST SURGICAL CLINIC
PINEHURST 28374 919 295-0206

MATHIESEN, KENNETH MARLIN FP /A 087
960 PLATEAU ST. A L
BRYSON CITY 28713 704 488-6844

MATHIS, JAMES LARRY P 074
DEPT. OF PSYCHIATRY AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2660

MATTERN, WILLIAM DOUGLAS NEP /IM 032
N. C. MEMORIAL HOSPITAL AC
CHAPEL HILL 27599 919 966-2561
FAX 919 966-4251

MATTHEWS, BRIAN LEWIS OTO 034
DEPT. OF OTOLARYNGOLOGY A AC
N. C. BAPTIST HOSPITAL
WINSTON-SALEM 27103 919 748-4161

MATTHEWS, CYNTHIA PIKE OBG 041
721 GREEN VALLEY RD., STE.300 AC
GREENSBORO 27408 919 275-5391

MATTHEWS, DAVID CARY PS 060
2215 RANDOLPH ROAD A AC
CHARLOTTE 28207 704 372-6846
FAX 704 342-0752

MATTHEWS, GEORGE POWERS GP 031
P. O. BOX 609 A L/RT
ROSE HILL 28458 919 289-2330

MATTHEWS, JAMES AUSTIN OBG 041
721 GREEN VALLEY RD., STE. 300 A AC
GREENSBORO 27401 919 275-5391

MATTHEWS, JOHN DAIL OPH 041
3312 BATTLEGROUND AVE. A P * AC
GREENSBORO 27410

MATTHEWS, MARJORIE E.F. FP 092
519 WADE AVE., APT. 3 C
RALEIGH 27605

MATTHEWS, ROLAND D. FP 001
1610 VAUGHN ROAD AC
BURLINGTON 27215 919 228-8333

MATTHEWS, WILLIAM CAMP IM /OM 060
RT. 4, BOX 470, THE FARM A L/RT
CHESTER, SC 29706 803 385-6975

MATTOX, HUITT EVERETT OBG 098
1700 S. TARBORO ST. P AC
WILSON 27893 919 291-9010

MATTOX, HUITT EVERETT, III IM /GE 034
114 JACOBS RD. R
ST. SIMONS IS, GA 31522

MATTOX, JAMES DWIGHT, JR. P 034
2990 BETHESDA PL. STE. 605-B A AC
WINSTON-SALEM 27104 919 768-8281

MATTSON, MARK WARREN GS 083
PO BOX 1808 A AC
LAURINBURG 28353 919 276-3541

MAUERHAN, DAVID ROBERT ORS 060
1001 BLYTHE BLVD., #200 A AC
CHARLOTTE 28203 704 373-0544

MAULL, JOHN M. IM 014
3 ALUMNI DR., STE. 203 AC
EXETER, NH 03833

MAULTSBY, JAMES ALEXANDER ORS /PM 041
1915 LENDEW ST. A AC
GREENSBORO 27408 919 545-0999

MAUNEY, FRANK MAXTON, JR. CDS /TS 011
257 MCDOWELL STREET A P * AC
ASHEVILLE 28803 704 258-1121
FAX 704 252-6114

MAUNEY, MICHAEL C. 032
13-B TARAWA TERRACE S
DURHAM 27705 919 383-9677

MAURO, MATTHEW ANTHONY DR 032
101 CATAWBA COURT AC
CHAPEL HILL 27514 919 966-1461

MAURO, PATRICIA MARCHASE D 032
2609 N. DUKE ST. STE. 505 A AC
DURHAM 27704 919 477-2121

MAUTERER, DAVID JOHN GS 011
50 DOCTORS DR. #105 AC
ASHEVILLE 28801 704 253-1529

MAWN, LOUISE ANN 034
226 OAKWOOD SQ. S
WINSTON-SALEM 27103 919 723-5418

MAXWELL, JAMES HEATH DR 041
2313 PRINCESS ANN ST. A AC
GREENSBORO 27408 919 854-6546

MAXWELL, JOHN GARY GS 065
2131 S. 17TH ST. A AC
WILMINGTON 28402 919 343-0161
FAX 919 762-6800

MAXWELL, JOHN KEVIN R 032
102-J COOPER ST. A R
CHAPEL HILL 27514 919 966-1461

MAXWELL, KEITH MELVIN 011
445 BILTMORE AVE., STE. 401 A P AC
ASHEVILLE 28801 704 251-1357

MAY, ALFRED T., III 000
4115 LIBERTY HIGHWAY A R
NORTH GATE APTS. A-24
ANDERSON, SC 29621 803 261-1475

MAY, CHARLES RAYSOR, III AN 026
2345 ROLLING HILL RD. A AC
FAYETTEVILLE 28304 919 323-5491

MAY, HARVEY CRAIG GYN 060
2711 RANDOLPH ROAD, SUITE 305 A * L
CHARLOTTE 28207 704 372-8020

MAY, JEANNINE MEECE PD 065
5305-N WRIGHTSVILLE AVE. AC
WILMINGTON 28403 919 392-5634

MAY, JOHN SCOTT OTO 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-4161

MAY, RONALD BRUCE PD /HEM 025
CRAVEN COUNTY HOSPITAL A AC
P. O. BOX 1390
NEW BERN 28560 919 633-4121
FAX 919 633-6443

MAY, WILLIAM JOSEPH GYN /OBG 034
300 S. HAWTHORNE ROAD A L
WINSTON-SALEM 27103 919 748-4595

MAYBIN, RICHARD MADDEN GP /HYP 023
109 BALL PARK RD. A AC
LAWNDALE 28090 704 538-8532

MAYDA, JARO, II VS 083
521 LAUCHWOOD DR. A AC
LAURINBURG 28352 919 277-8002

MAYER, EUGENE STEPHEN GPM 032
UNC, CB 7165, WING C, BOX 3 A * AC
CHAPEL HILL 27599 919 966-2461
FAX 919 966-5830

MAYER, MARK EDWARD IM 051
307 W. MAIN ST. A * AC
BENSON 27504 919 894-2011

MAYER, NORMAN MICHAEL EM 041
P. O. BOX 29066 AC
GREENSBORO 27408 919 379-4040

MAYER, WALTER BREM IM 060
2420--407 ROSWELL AVENUE A L/RT
CHARLOTTE 28209 704 333-4322

MAYNARD, CHARLES DOUGLAS NM 034
BOWMAN GRAY, DEPT. OF RAD. A AC
WINSTON-SALEM 27103 919 748-4575
FAX 919 748-2029

MAYNARD, DAVID RUSSELL AN 041
213 MISTLETOE DR. A AC
GREENSBORO 27403 919 855-0767

MAYNARD, EUGENE HAROLD, JR. 032
2525 BOOKER CREEK RD., APT. 3C S
CHAPEL HILL 27514 919 967-3930

MAYO, JOSEPH DIXON, JR. FP 091
949 MEADOW LANE L/RT
HENDERSON 27536 919 438-3155

MAYO, KATHY DIANE 074
1017-A WESTOVER DR. R
GREENVILLE 27834 919 551-2660

MAYRAND, ELIZABETH PTH 080
508 PLYMOUTH AVE. A P L
SALISBURY 28144 704 638-1078

MAYS, OLIVER AIKEN PH 096
408 TAYLOR PLACE A AC
GOLDSBORO 27530 919 731-1000

MAYSE, RAY SCOTT IM 023
608 W. KING ST. AC
KINGS MOUNTAIN 28086 704 739-9776

MAZZOCCHI, ANNMARIE FP 041
1016-A PROFESSIONAL VILLAGE AC
GREENSBORO 27401 919 282-1918

MCADAMS, CHARLES R.,JR. GS /GYN 060
PO BOX 221366 L/RT
CHARLOTTE 28222 704 366-3609

MCADAMS, HOLMAN PAGE DR 032
10321 CRESTMOOR DR. A R
SILVER SPRING, MD 20901 301 681-8511

MCALISTER, JAMES ALLEN, JR PTH /CLP 060
1901 RANDOLPH RD. A AC
CHARLOTTE 28207 704 375-6792

MCALISTER, LINDA THERESA OBG 026
511 OWEN DR. AC
FAYETTEVILLE 28304 919 485-1191

MCALLISTER, DAVID WHITNEY OBG 060
2711 RANDOLPH RD., STE. 512 AC
CHARLOTTE 28213 704 333-4104

MCALLISTER, JAMES GRAY, III P /D 092
1004 DRESSER CT., STE. 108 AC
RALEIGH 27609 919 876-0287

MCALLISTER, RUSSELL G.,JR. CD /PA 032
3712 DOVER RD. A AC
DURHAM 27707 919 361-2286

MCALLISTER, VINCENT 074
BOX 46, DAVID DR. A S
BRANCH'S ESTATES
GREENVILLE 27858 919 756-2475

MCAULIFFE, JOHN EDWARD AN 064
3709 WESTRIDGE CIRCLE DR. AC
ROCKY MOUNT 27801 919 443-2125

MCBRIDE, ALLEN JOSEPH FP /ADM 032
BLUE CROSS/BLUE SHIELD OF NC A * AC
PO BOX 2291
DURHAM 27702 919 490-2585
FAX 919 493-5626

MCBRIDE, J. MARVIN, JR. FP 092
1109 DRESSER COURT AC
RALEIGH 27609 919 872-4900

MCBRIDE, ROBERT BENNIS, JR. ORS 060
101 W. T. HARRIS BLVD. #220A A AC
CHARLOTTE 28262 704 547-1552

MCBRYDE, ANGUS MURDOCH, JR. ORS 060
120 PROVIDENCE RD. * AC
CHARLOTTE 28207 704 377-0351
FAX 704 373-0746

MCCABE, JAMES CARDEN 034
201 DRIFTWOOD LANE R
WINSTON-SALEM 27104 919 748-2011

MCCABE, JAMES MICHAEL P /N 080
102 MOCKSVILLE AVE. A AC
SALISBURY 28144 704 636-5997

MCCAIN, JOHN LEWIS RHU /IM 098
WILSON CLINIC A AC
WILSON 27893 919 291-7001
FAX 919 237-6114

MCCAIN, KENNETH FRANKLIN A 034
223 HARPER STREET AC
WINSTON-SALEM 27104 919 765-3756

MCCALL, CHARLES EMORY IM /ID 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-4584

MCCALL, MARVIN MATHER, III IM /CD 060
P. O. BOX 32861 A AC
CHARLOTTE 28232 704 355-3165

MCCALL, MICHAEL ALVIN FP /GER 059
P. O. BOX 1229 A AC
MARION 28752 704 433-2492

MCCALL, WILLIAM HERBERT OPH 011
930 COUNTRY CLUB RD. A L
ASHEVILLE 28804 704 253-0421

MCCALL, WILLIAM, JR. A /IM 034
1405 PLAZA DRIVE AC
WINSTON-SALEM 27103 919 765-4131

MCCALMONT, CAMILLA S. D 034
163 ULLOA ST. R
SAN FRANCISCO, CA 94127

MCCALMONT, TIMOTHY HUGH /D 034
163 ULLOA ST. R
SAN FRANCISCO, CA 94127

MCCANN, RICHARD LUCAS VS /GS 032
BOX 2990, DUMC A AC
DURHAM 27710 919 684-2620

McARN, HUGH MUNROE, JR. FP 083
422 KING ST. AC
LAURINBURG 28352 919 276-2100

MCCARTNEY, CHERYL FAINTUCH P 032
UNC, CB #7160 A AC
CHAPEL HILL 27599 919 966-4551

MCCARTNEY, WILLIAM HUGH DR /NM 032
NCMH, DEPT. OF RADIOLOGY AC
CHAPEL HILL 27599 919 966-4384
FAX 919 966-6923

MCCARTY, RALPH LEEVES CRS 060
843 HEMPSTEAD PL. A L/RT
CHARLOTTE 28207 704 333-1259

MCCASKILL, LLOYD CURTIS EM /FP 083
P. O. BOX 788 A AC
MAXTON 28364 919 276-2121

MCCASKILL, SAMUEL GAULT, JR. OBG 091
RUIN CREEK ROAD A AC
HENDERSON 27536 919 492-8576

MCCASLIN, ROBERT IAN PD 001
530 W. WEBB AVE. AC
BURLINGTON 27215 919 228-8316

MCCAULEY, ROGER LEE P 034
190 CHARLOIS BOULEVARD A AC
WINSTON-SALEM 27103 919 768-6930
FAX 919 768-6328

MCCLOSKEY, SCOTT MICHAEL NS 018
415 N. CENTER ST., STE 203 A AC
HICKORY 28601 704 327-9740

MCCLURE, MARK WARREN U 092
3320 WAKE FOREST RD.,STE. 100 AC
RALEIGH 27609 919 790-0036

MCCOLLUM, DONALD EUGENE ORS 032
BOX 2919, DUMC A AC
DURHAM 27710 919 684-4055

MCCOMB, JOHN SANFORD OBG 041
721 GREEN VALLEY RD., STE. 200 AC
GREENSBORO 27408 919 574-2229

MCCOMBS, RICK IM 034
1517 KENWALT DR. R
CLEMMONS 27012

MCCONNACHIE, CHARLES CHRIS. ORS 045
1027 FLEMING STREET H
HENDERSONVILLE 28739

MCCONNELL, MARY HELEN PD 011
675 BILTMORE AVENUE A S/RT
ASHEVILLE 28803 704 253-1641

MCCONNELL, ROBERT WILLIAM R /NM 074
EASTERN RADIOLOGISTS AC
#9 DOCTORS PARK
GREENVILLE 27834 919 752-5000
FAX 919 752-0166

MCCONVILLE, JOSEPH FRANCIS AN 034
2257 BRECKNOCK DR. A AC
WINSTON-SALEM 27103 919 765-2259

MCCONVILLE, ROBERT HOWARD, JR. FP/GER 053
611 WICKER ST. AC
SANFORD 27330 919 774-6023

MCCOOL, JAMES ALVIS PTH 034
3333 SILAS CREEK PARKWAY A P AC
WINSTON-SALEM 27103 919 760-5840

MCCORMACK, SANDRA L. FP 075
1124 LYNN RD. AC
TRYON 28782 704 859-9783

MCCORMICK, CAROLYN BRUMM FP 078
2606 N. ELM ST. A AC
LUMBERTON 28358 919 738-3718

MCCORMICK, GEORGE MITCHELL 034
N. C. BAPTIST HOSPITAL R
BOX 283
WINSTON-SALEM 27103 919 748-2011

MCCORMICK, JOHN THOMAS ORS 014
401 MULBERRY ST. SW. STE. 103 A P AC
LENOIR 28645 704 758-7091

MCCOWAN, KEVIN G. 032
9318 BRACKEN LN. #D S
CHAPEL HILL 27516

MCCOY, JOSEPH BENNETT, JR. GYN 060
3646 SEDGEWOOD CIR. L/RT
CHARLOTTE 28211 704 377-0461

MCCOY, RALPH CARLISLE PTH 065
6320 S. BRADLEY OVERLOOK A AC
WILMINGTON 28403 919 343-7074

MCCOY, THOMAS HATTON ORS 060
2600 E. 7TH ST. A AC
PO BOX 35228
CHARLOTTE 28235 704 372-9820

MCCRACKEN, JOSEPH STUART OPH 032
2609 N. DUKE ST., STE. 802 AC
DURHAM 27704 919 220-5439

MCCRORY, MICHAEL ELLIOTT DR 032
2609 N. DUKE ST. STE. 303 A P AC
DURHAM 27704 919 471-8411

MCCUEN, BROOKS WALTON, II OPH 032
BOX 3802, DUMC A AC
DURHAM 27710 919 684-6749
FAX 919 684-2230

MCCULLEN, BOBBY K.,JR. OPH /OALR 032
303 BROOKBERRY CIRCLE R
CHAPEL HILL 27514 919 966-5296

MCCULLOUGH, CHARLES T.,JR. ORS 011
129 MCDOWELL ST. AC
ASHEVILLE 28801 704 258-8800

MCCULLOUGH, DAVID LEGARDE U 034
BOWMAN GRAY, DEPT. OF URO. A AC
WINSTON-SALEM 27103 919 748-4131

MCCUNNIFF, ANN JONES ON /TR 034
1025 WESSYNGTON RD. A AC
WINSTON-SALEM 27104 919 748-4981

MCCUNNIFF, DENNIS EDWARD OBG 034
1025 WESSYNGTON ROAD AC
WINSTON-SALEM 27104 919 768-3632

MCCURDY, DONALD PITTARD OPH 060
2200 E. 7TH ST. A AC
CHARLOTTE 28204

MCCUTCHAN, JAMES HUTTON IM /ID 032
UNC STUDENT HEALTH-BOX 7074 AC
CHAPEL HILL 27599 919 966-2281

MCCUTCHEN, THOMAS M.,JR. PD 026
1213 WALTER REED ROAD * AC
FAYETTEVILLE 28304 919 484-6121

MCCUTCHEON, JULIA WINN 032
110 PERSIMMON HILL RD. R
PITTSBORO 27312 919 966-5711

MCCUTCHEON, WILLIAM B.,JR. TS /CDS 032
3901 ROXBORO RD. A RT
DURHAM 27704 919 383-5531

MCDANIEL, EUGENE MARVIN, JR. OBG 070
1141 N. ROAD ST. AC
ELIZABETH CITY 27909 919 338-0101

MCDANIEL, JACK PASCHAL OBG 026
1320 MEDICAL DRIVE A AC
FAYETTEVILLE 28304 919 323-3301

MCDANIEL, WILLIAM JASON, JR. ORS 092
P. O. BOX 10707 A AC
RALEIGH 27605 919 781-5600
FAX 919 782-6578

MCDEVITT, NOEL BRUCE PS /PSF 063
4 MEMORIAL DR. EAST * AC
PO BOX 3550
PINEHURST 28374 919 295-1917
FAX 919 295-1481

MCDONALD, CARY CRANE EM
2914 N. BROADWAY #1 A P C
CHICAGO, IL 60657 312 929-1369

MCDONALD, RALPH N. CD /IM 018
230 18TH ST., CIR. SE A AC
HICKORY 28601 704 324-4804

MCDONALD, ROBERT L. IM 060
217 TRAVIS AVE. AC
CHARLOTTE 28204 704 372-3350

MCDONNELL, CHARLES H., III 032
910 CONSTITUTION DR. #419 A * R
DURHAM 27705 919 383-8369

MCDOUGAL, EMORY GARY VS 018
RT. #2, BOX 190 AC
CONOVER 28613 704 322-9105

MCDOWELL, ROBERT WARREN GP 092
734 ROCK QUARRY ROAD L
RALEIGH 27610 919 832-5389

MCDOWELL, ROY HENDRIX FP 036
1199 HAYES DR. A L/RT
BROOKRIDGE APT. 521
WINSTON-SALEM 27106 704 825-8546

MCDUFFIE, ROBERT STANLEY OBG 011
325 VANDERBILT RD. L/RT
ASHEVILLE 28803 704 274-2795

MCELLIGOTT, JACINTA MARY PM 074
ECU SCHOOL OF MEDICINE A AC
DEPT. PHYSICAL MED & REHAB.
GREENVILLE 27858 919 757-4440

MCELVEEN, JOHN T., JR. OT /OTO 032
BOX 3805, DUMC A AC
DURHAM 27710 919 684-2475
FAX 919 684-4611

MCELWEE, THOMAS BRENTON GS 060
3535 RANDOLPH RD. 201-W AC
CHARLOTTE 28211 704 757-4629

MCENTIRE, JERRILL LEE FP 059
700 AIRPORT RD. AC
MARION 28752 704 668-7694

MCFADDEN, JAMES STUART AN 063
35 MCDONALD RD. WEST AC
PINEHURST 28374 919 295-7184

MCFADYEN, OSCAR LEE, JR. IM 026
524 VALLEY ROAD A L/RT
FAYETTEVILLE 28305 919 484-0221

MCFALLS, VERNON WENDELL PD 040
624 QUAKER LANE, SUITE 100-A AC
HIGH POINT 27262 919 882-4187

MCGANN, KAREN PATRICIA FP 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-2230

MCGEARY, SCOTT ALAN PD /ID 092
3100 DURALEIGH RD. C
RALEIGH 27612 919 881-5485

MCGEE, JOHN ASBURY, JR. GYN 060
1901 BRUNSWICK AVE. AC
CHARLOTTE 28207 704 343-3400

MCGEE, MARK FLETCHER P 032
1511 ECHO ROAD A R
DURHAM 27707 919 493-1352

MCGEE, ROBERT SAUNDERS, JR. 034
6308 LAKEBEND COURT A S
GREENSBORO 27410 919 665-1990

MCGHEE, TERENCE BARCLAY N /IM 011
7 MCDOWELL STREET A AC
ASHEVILLE 28801 704 255-7776

MCGILL, JOHN CHARLES FP 023
PO BOX 1309 A AC
KINGS MOUNTAIN 28086 704 739-3681

MCGILLICUDDY, DENIS MICHAEL ORS 074
604 MEDICAL DR. A AC
GREENVILLE 27834 919 758-1777

MCGIMSEY, JAMES FRANKS, JR. IM /P 012
WESTERN CAROLINA CENTER L
ENOLA ROAD
MORGANTON 28655 704 433-2744

MCGINNIS, BARRY DOUGLAS R 060
CHARLOTTE RADIOLOGY A AC
PO BOX 36937
CHARLOTTE 28236 704 331-2274

MCGINNIS, LEE ANN M. AN 060
P.O. BOX 36351 P AC
CHARLOTTE 28236 704 338-2372

MCGIRT, MURPHY FRANK, JR. ORS 054
KINSTON CLI., NORTH AC
KINSTON 28501 919 522-4155

MCGRATH, JAMES STUART FP 032
3116 N. DUKE ST. C
DURHAM 27704 919 479-6200

MCGREGOR, JUDITH CRAIG DR 012
570 20TH AVENUE CT. NW A C
HICKORY 28601 704 874-4088

MCGRORY, EDWARD JOSEPH,JR. OPH 092
3900 OLD WAKE FOREST ROAD A AC
RALEIGH 27609 919 872-3242

MCGUIRE, JOHN O'BRIEN GS /VS 011
16 MCDOWELL STREET A * AC
ASHEVILLE 28801 704 252-3366

MCGUIRT, WILLIAM FREDERICK OTO /ON 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4161

MCILWAIN, THOMAS P. P 026
1262 OLIVER ST. AC
FAYETTEVILLE 28304 919 484-5151

MCINNIS, ANGUS GUY FP 079
1123 S. MAIN STREET AC
REIDSVILLE 27320 919 342-4286

MCINTOSH, ARCHIBALD NOCK GP 059
219 S. MAIN STREET A L
MARION 28752 704 652-4211

MCINTOSH, OVETA B. PD 032
1811 EASTWOOD DR. AC
DURHAM 27713 919 683-1316

MCINTYRE, PAULA RUTH 000
1853 TRYON DR. R
FAYETTEVILLE 28303 919 323-1152

MCINTYRE, ROSS WILLIAM AN 034
FORSYTH MEM. HOSPITAL AC
WINSTON-SALEM 27103 919 681-4774

MCJILTON, ROY ALAN OTO 078
4303 LUDGATE ST. A P AC
LUMBERTON 28358 919 738-4226

MCKAY, CLINTON HULL IM 060
5135 HARDISON RD. A L/RT
CHARLOTTE 28226 704 373-0700

MCKAY, HAMILTON W., JR. AI 060
2711 RANDOLPH RD. STE. 400 AC
P. O. BOX 221189
CHARLOTTE 28207 704 372-7900
FAX 704 376-2216

MCKAY, JAMES HAMILTON WOODROW FP 061
200 SEVEN MILE RIDGE RD. A AC
BURNSVILLE 28714 704 675-4116

MCKAY, MICHAEL DIXON GE 092
3320 WAKE FOREST RD. AC
RALEIGH 27609 919 872-4850

MCKEE, LEWIS MIDDLETON IM 032
17 SURREY LN., HOPE VALLEY A L/RT
DURHAM 27707 919 489-3262

MCKEEL, MILLARD FILMORE NS 011
445 BILTMORE AVE. L/RT
ASHEVILLE 28801 704 258-8500

MCKEITHEN, MURDOCH RITCHIE OBG 083
P. O. BOX 1808 A AC
LAURINBURG 28353 919 276-4432

MCKENNA, WILLIAM R. ID 011
445 BILTMORE CENTER, STE. 404 AC
ASHEVILLE 28801 704 258-9635

MCKENZIE, EDWARD BURT GS 080
709 BARKER STREET L/RT
SALISBURY 28144 704 633-3441

MCKENZIE, SHEPPARD ALLEN, III OBG /IM 092
3805 COMPUTER DRIVE AC
RALEIGH 27609 919 781-6200

MCKENZIE, WAYLAND NASH GP 084
P. O. BOX 248 A * L
ALBEMARLE 28002 704 982-3312

MCKEOWN, WILLIAM DAVID IM /GER 041
1511 WESTOVER TERR., STE. 108 A AC
GREENSBORO 27408 919 378-9906

MCKINLEY, PHILIP HOWARD OPH 034
3111 MAPLEWOOD AVENUE AC
WINSTON-SALEM 27103 919 768-3240

MCKINNEY, ALEXANDER STUART N 044
102 HOSPITAL DR. A * AC
CLYDE 28721 704 452-0331

MCKINNEY, JOHN J., JR. IM 029
PIEDMONT INTERNAL MED. PA A AC
1632 NATIONAL HIGHWAY
THOMASVILLE 27360 919 885-7311

MCKINNEY, MARTHA L. 034
1608 W. NORTHWEST BLVD. #O A * S
WINSTON-SALEM 27104 919 723-4780

MCKINNEY, WILLIAM MARKLEY N 034
BOWMAN GRAY-NEUROLOGY AC
WINSTON-SALEM 27103 919 748-4494
FAX 919 748-4204

MCKINNON, STEVE MALONE OPH 049
1308 DAVIE AVE. AC
PO BOX 991
STATESVILLE 28677 704 873-1463

MCKINNON, WILLIAM JAMES GS 004
501 W. WADE ST. A L/RT
WADESBORO 28170

MCKNIGHT, KEVIN MICHAEL 034
423 BRENT ST. R
WINSTON-SALEM 27103 919 748-4209

MCKNIGHT, MARTHA ANNE P /CHP 092
4856 LITTLE FALLS DR. AC
RALEIGH 27609 919 733-6355

MCLAIN, BILL REID FP 049
ROUTE #2, BOX 542 A RT
MOORESVILLE 28115 704 663-3584

MCLAIN, LEE WILLIAM, JR. N 092
PO BOX 40999 A AC
RALEIGH 27629 919 782-3456

MCLAMB, JOSEPH TIMOTHY ORS 096
2701 MEDICAL OFFICE PLACE AC
GOLDSBORO 27530 919 736-2157
FAX 919 580-0424

MCLAMB, SAMUEL BAGGETT, JR. IM 096
201 COX BOULEVARD AC
GOLDSBORO 27530 919 734-9455

MCLANAHAN, CHARLES SCOTT NS 060
1010 EDGEHILL ROAD, N. A P AC
CHARLOTTE 28207 704 376-1605

MCLANE, JAMES W. 034
1615 NORTHWEST BLVD. A S
WINSTON-SALEM 27104 919 761-1790

MCLAUGHLIN, JAMES CHARLES OBG 034
250 CHARLOIS BOULEVARD AC
WINSTON-SALEM 27103 919 768-4730

MCLEAN, AUGUSTUS ALEXANDER, JR GP 008
P. O. BOX 98 A L/RT
MURFREESBORO 27855 919 398-3789

MCLEAN, HARRY H., III FP /EM 074
RT. #2, BOX 52 AC
WINTERVILLE 28590 919 757-6841

MCLEAN, JONATHAN OWENS CD /IM 060
1718 E. FOURTH ST. #501 AC
CHARLOTTE 28204 704 377-0575
MCLEAN, MALCOLM PD 060
2711 RANDOLPH RD. STE. 307 AC
CHARLOTTE 28207 704 332-6625
MCLEAN, WALTER COPLEY, JR. OPH 011
276 E. CHESTNUT ST. AC
ASHEVILLE 28801 704 255-8978
FAX 704 251-9150
MCLEAN, WILLIAM THADDEUS, JR. N /PD 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-2316
MCLEAR, RONALD KENT EM 032
3200 CROASDAILE DR. STE. 201 A AC
DURHAM 27705 919 383-0709
MCLELLAND, ROBERT DR 032
UNC DEPT. OF RADIOLOGY AC
CHAPEL HILL 27599 919 966-3084
FAX 919 966-6923
MCLENDON, WILLIAM WOODARD CLP/PTH 032
N. C. MEMORIAL HOSPITAL A AC
DEPT. OF HOSPITAL LABORATORIES
CHAPEL HILL 27599 919 966-2317
MCLEOD, JONNIE HORN PD 060
1504 BILTMORE DR. * AC
CHARLOTTE 28207 704 547-2171
MCLEOD, MARY MARGARET PD /A 053
P. O. DRAWER 1047 A L/RT
SANFORD 27330 919 775-7642
MCLEOD, MELISSA M. 034
120 VINTAGE AVE. R
WINSTON-SALEM 27127 919 748-2011
MCLEOD, MICHAEL EUGENE GE /IM 032
BOX 3073, DUMC AC
DURHAM 27710 919 684-4046
MCLEOD, VIDA CANADAY GP 063
WEYMOUTH APTS., BOX 2001 A L/RT
SOUTHERN PINES 28387 919 692-0333
MCLEOD, WILLIAM LESLIE GYN 060
2711 RANDOLPH ROAD, STE. 305 * L/RT
CHARLOTTE 28207 704 372-8020
MCLESTER, WILLIAM DUMAS OPH /PTH 026
1635 OWEN DR. #A A P AC
FAYETTEVILLE 28304 919 323-2002
MCLOUGHLIN, JILL HICKEY IM 060
217 TRAVIS AVE. AC
CHARLOTTE 28204 704 372-3350
MCMAHAN, THOMAS KEITH IM /FP 097
PO BOX 976 A P AC
1710 PARKWOOD DR.NORTH
WILKESBORO 28697 919 667-2634
MCMANUS, HUGH FORREST, JR. IM 092
3331 WHITE OAK RD. A L
RALEIGH 27609 919 832-6510
MCMANUS, KEITH ERIC FP 019
BOX 380, 801 W. THIRD ST. A P * AC
SILER CITY 27344 919 663-0085
FAX 919 663-0289
MCMILLAN, CAMPBELL WHITE PHO /PD 032
UNC, DEPT. OF PED. CB #7220 AC
CHAPEL HILL 27599 919 966-3133
MCMILLAN, JAMES FULFORD P 065
1301 LIVE OAK PARKWAY A L/RT
WILMINGTON 28403 919 762-8178
MCMILLAN, JAMES H. FP 011
206 ASHELAND AVE. AC
ASHEVILLE 28801 704 258-8681
MCMILLAN, MARSHALL P. FP 060
6900 FARMINGDALE DR. AC
CHARLOTTE 28212 704 536-3286
MCMILLAN, ROBERT MONROE IM 063
CCNS, ROYAL DORNOCH LANE 11 A L/RT
PINEHURST 28374 919 692-6885
MCMILLAN, THOMAS HENRY, JR. IM 060
1001 BLYTHE BLVD., STE. 500 A AC
CHARLOTTE 28203 704 355-5100
FAX 704 355-5180
McMURRAY, CLARENCE McCAIN IM 023
129 HILLSIDE A L/RT
SHELBY 28150 704 482-1482
MCMURRY, AVERY WILLIS GS 023
207 LEE STREET A P * AC
SHELBY 28150 919 482-6350
MCMURRY, DAVID WILLIS IM 013
130 LAKE CONCORD ROAD A AC
CONCORD 28025 704 782-3114
MCMURRY, JOHN EUGENE, JR. OTO 065
2311 DELANEY AVE. AC
WILMINGTON 28401 919 762-8754
MCMURRY, WARREN W. GS /VS 065
1922 TRADD COURT A AC
WILMINGTON 28401 919 343-0811
FAX 919 251-1877
MCNABB, JAMES WILLIAM FP 049
RT. #7, BOX 720 A AC
MOORESVILLE 28115 704 664-7328
FAX 704 664-7783
MCNAIR, NANCY L. N 074
2501 STANTONSBURG RD., ECNA A AC
GREENVILLE 27834 919 752-4848
MCNAMARA, JOHN FRANCIS, II OBG 060
2711 RANDOLPH ROAD, STE 512 A AC
CHARLOTTE 28207 704 333-4104
MCNAMARA, MICHAEL J. ORS 032
1227 SEATON RD. #T65 R
DURHAM 27713 919 684-8111
MCNAMARA, MICHAEL T. OBG 040
712 N. ELM ST. A AC
HIGH POINT 27262 919 889-5422
MCNEIL, QUINCY ALBERT, JR. OBG 034
2909 MAPLEWOOD AVENUE AC
WINSTON-SALEM 27103 919 765-2802
MCNEILL, CLAUDE ACKLE, JR. FP 086
248 DUTCHMAN CREEK RD. A L/RT
ELKIN 28621 919 835-2345
MCNEILL, DONALD DRAKE, JR. PTH /CLP 014
P. O. DRAWER 680 A AC
LENOIR 28645 704 754-7063
MCNIEL, JESSE NEAL P 001
1602 MEMORIAL DRIVE A P AC
BURLINGTON 27215 919 227-1123
MCNUTT, ROBERT A. IM 032
7110, 5039 OLD CLINIC BLDG. AC
UNC, DEPT. OF MEDICINE
CHAPEL HILL 27599 919 966-2276
MCPHAIL, SCHUBERT DEAN OBG 041
1517 N. CHURCH ST. A AC
GREENSBORO 27405 919 379-8460
MCPHERSON, HARRY THURMAN END /IM 032
DUKE UNIV. MED. CTR. AC
DURHAM 27710 919 684-2186
MCPHERSON, SAMUEL DACE, JR. OPH 032
1110 W. MAIN STREET L
DURHAM 27701 919 682-9341
MCQUADE, JOHN FRANCIS, III CD 025
PO BOX 2566 A AC
NEW BERN 28561 919 633-1010
MCQUEEN, CHAPMAN T. 032
101 FRIAR LANE S
CARRBORO 27510 919 226-9650
MCQUEEN, FRED DOUGLAS, JR. FP 077
P. O. DRAWER 1257 AC
HAMLET 28345 919 895-3138
MCQUEEN, ROBERT BRUCE, JR. FP 001
780 WOODY DRIVE AC
GRAHAM 27253 919 228-1354
MCRAE, MARVIN EVERETT D 041
1009 COUNTRY CLUB DR. A L/RT
GREENSBORO 27408
MCRAE, WILLIAM KENNETH GP 041
815 WINVIEW DR. A RT
GREENSBORO 27410 919 299-7944
MCREE, CHRISTINE ELLIS CHP 092
DOROTHEA DIX HOSP.-PSY AC
RALEIGH 27611 919 733-5344
MCROBERTS, DEBORAH S. W. FP 062
104 PROFESSIONAL DR. * AC
PO BOX 429
BISCOE 27209 919 428-9607
MCWHORTER, JOE MAURICE NS 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4020
MCWHORTER, ROBERT LIGON IM 013
390 COPPERFIELD BLVD. A AC
CONCORD 28025 704 782-3135
FAX 704 782-3149
MEADOR, PHILIP D., JR. D 091
MEDICAL SERVICE BLDG. AC
RUIN CREEK ROAD
HENDERSON 27536 919 492-2123
MEADORS, WALTER V., JR. OBG 049
702 HARTNESS RD. AC
STATESVILLE 28677 704 873-7250
MEADS, MANSON IM 034
300 S. HAWTHORNE RD. A L/RT
WINSTON-SALEM 27103 919 748-4301
MEANS, ROBERT LEE GS 034
4001 PHILPARK DR. L/RT
WINSTON-SALEM 27106
MEANS, WILLIAM ELBERT CD /IM 034
1399 WESTGATE CENTER DR. AC
WINSTON-SALEM 27103 919 768-4261
MEASE, WILLIS EUGENE FP 067
209 S. CHURCH ST. A P * AC
RICHLANDS 28574 919 324-3105
MEBANE, JOHN GILMER IM 081
P. O. BOX 1405 A L/RT
RUTHERFORDTON 28139 704 287-3515
MEDDERS, JAMES DOYLE GP /CD 035
113 JOLLY STREET A * AC
LOUISBURG 27549 919 496-4250
MEDDERS, RUSSELL GLEN OTO 092
3100 BLUE RIDGE RD. AC
RALEIGH 27607 919 787-1374
MEDINA-WALPOLE, ANNETTE MARIE IM 032
704 SUSSEX AVE. R
SANFORD 27330 919 775-1418
MEDLIN, CHARLES THOMAS FP 092
7012 FARMDALE RD. A AC
RALEIGH 27610 919 772-3266
MEDOFF, JEFFREY ROY GE 041
520 N. ELAM AVE. A P AC
GREENSBORO 27403 919 547-1700
FAX 919 547-1717
MEEK, JOE BERNARD ORS 026
1300 MEDICAL DRIVE AC
FAYETTEVILLE 28304 919 484-2171
FAX 919 484-4568
MEEKHOF, MARK J. OBG 067
245 MEMORIAL DR. A AC
JACKSONVILLE 28540 919 353-4333
MEGA, LESLY TAMARIN CHP /P 074
DEPT. OF PSYCHIATRY A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2673
MEGGS, WILLIAM JOEL AI /IM 074
ECU SCHOOL OF MEDICINE AC
GREENVILLE 27858 919 551-2562
FAX 919 551-2012
MEHTA, HASUMATI VIJAYKUMAR FP /OBG 026
518 SANDHURST DR. AC
FAYETTEVILLE 28304 919 323-4091
MEHTA, NALIN CHIMANLAL IM /ON 084
815 N. THIRD ST. AC
ALBEMARLE 28001 704 983-3508
MEHTA, VIJAYKUMAR B. HEM /ON 026
518 SANDHURST DR. AC
FAYETTEVILLE 28304 919 323-4091
MEIS, PAUL JEAN OBG /NPM 034
BOWMAN GRAY,DEPT. OF OBG AC
WINSTON-SALEM 27103 919 748-4039
MELARAGNO, HELEN P. FP 060
2001 E. FIFTH STREET AC
CHARLOTTE 28204 704 373-1663
MELCHIOR, JOSEPHINE T. PD 098
1124 NIBLICK DRIVE L/RT
ROCKY MOUNT 27804 919 442-8290
MELERO, ANDRES TARCISIO GS /TS 073
P. O. BOX 28 A AC
ROXBORO 27573 919 599-2953
MELLEY, OFELIA NICKEL FP 063
PO BOX 625 AC
PINEHURST 28374 919 295-1240
MELSER, MARC ALAN U 024
720 JEFFERSON ST. A AC
WHITEVILLE 28472 919 642-5832
MELTON, GWENESTA BARNUM IM /RHU 026
1756 METROMEDICAL DR. A AC
FAYETTEVILLE 28304 919 323-1322
MELTON, JAMES DURANT FP 012
ROUTE #3, BOX 50 A AC
MORGANTON 28655 704 437-9401
MELTON, KATHERINE ROSE GS /GYN 060
1900 RANDOLPH RD. #906 RT
CHARLOTTE 28207 704 332-6756
MELTON, KENNETH NEP /IM 026
PO BOX 42736 A AC
FAYETTEVILLE 28304 919 484-8114

MELUCK, ANTHONY MATTHEW AN 049
715-D HARTNESS RD. AC
STATESVILLE 28677 704 873-5651

MELTZER, MORTON FP /P 092
ROUTE 1, BOX 231-A A P AC
CAMERON 28326 919 245-4819

MELVIN, TERESA BOWEN 060
CAROLINAS MED. CTR. A R
CHARLOTTE 28203 704 338-2000

MELVIN, WINSLOW BRITT AN 074
RT. #1, BOX 92-A A AC
WINTERVILLE 28590 919 355-3383

MENACHEM, ALLAN IM /GE 024
903 JEFFERSON ST. AC
WHITEVILLE 28472 919 642-6121
FAX 919 642-8451

MENARD, MARY KATHRYN OBG 032
406 CATE HOUSE LN. C
DURHAM 27707 919 966-1274

MENDELSOHN, STEVEN LOUIS RHU /IM 011
445 BILTMORE CTR., STE. 306 AC
ASHEVILLE 28801 704 258-9533

MENSCER, DARLYNE FP /GER 060
DEPT. OF FAMILY PRACTICE A P * AC
CAROLINAS MEDICAL CENTER
CHARLOTTE 28232 704 355-3172
FAX 704 355-3116

MEREDITH, JAY WAYNE TRS /TS 034
BOWMAN GRAY-SURGERY A AC
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-2011
FAX 919 748-5414

MEREDITH, JESSE HEDGEPETH GS /TS 034
BOWMAN GRAY-SURGERY A * AC
WINSTON-SALEM 27103 919 748-4278

MERLO, RICHARD BARTLETT R /NM 086
773 BROOKWOOD DRIVE A AC
ELKIN 28621 919 835-3722

MEROD, MARJORIE E. R. OBG 092
4024 JOHN S. RABATEAU WYND A AC
RALEIGH 27612 919 782-9005

MERRILL, JEFFREY R. FP 000
212 E. BESSEMER AVE. #A R
GREENSBORO 27401 919 379-3900

MERRILL, RICHARD HOSMER NEP /IM 074
DEPT. OF MEDICINE AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2545

MERTESDORF, JAMES MICHAEL GE 065
1515 DOCTORS CIRCLE AC
WILMINGTON 28401 919 763-1219

MERWARTH, CHARLES RICHARD IM /A 092
515 MARLOWE RD. AC
RALEIGH 27609 919 782-7500

MESROBIAN, HRAIR-GEORGE U 032
428 BURNETT-WOMACK,229H A * AC
UNC, SCH. OF MED. CB #7235
CHAPEL HILL 27599 919 966-6686

MESSENHEIMER, JOHN ANDREW N 032
UNC, DEPT. OF NEUROLOGY A AC
CHAPEL HILL 27599 919 966-3707

MESSER, BERNIECE REDMOND 074
110 MARTHA LOOP A S
FARMVILLE 27828 919 753-5671

MESSICK, CATHERINE H. IM 006
PO BOX 1568 AC
BANNER ELK 28604 704 898-6201

MESSICK, WILLIAM JOSEPH GS /VS 006
PO BOX 1568 AC
MTN. SPECIALITY HEALTH CARE
BANNER ELK 28604 704 898-6201

MESSNER, DANIEL K. OPH 063
2170 MIDLAND RD. AC
SOUTHERN PINES 28387 919 295-2100

METZGER, GEORGE ANDREW IM /NEP 014
322 MULBERRY ST., SW AC
PO BOX 1020
LENOIR 28645 704 758-5544

METZGER, W. JAMES IM /AI 074
DEPT. OF MED/ALLERGY AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2562

MEYER, ANDREW FREDERIC AN 032
BOX 3083, DUKE MED. CENTER AC
DURHAM 27710 919 681-6526

MEYER, ANDREW HOYT 032
7307-106 CALIBRE PARK DR. A R
DURHAM 27707 919 684-8111

MEYER, CLINTON LOUIS GE /IM 065
1202 MEDICAL CENTER DR. AC
WILMINGTON 28401 919 341-3345

MEYER, DAVID DAVIS 034
1800 S. HAWTHORNE ROAD AC
WINSTON-SALEM 27103 919 768-1860
FAX 919 760-3868

MEYER, GEORGE WRIGHT OPH 032
1106 HILLANDALE ROAD A L
DURHAM 27705 919 286-9663

MEYER, JOHN A. AN 011
202 DOCTORS BLDG. A AC
ASHEVILLE 28801 704 254-1969

MEYER, PAUL FREDRICK FP 029
10 MEDICAL PARK DR., STE. 2 A AC
LEXINGTON 27292 704 249-3329

MEYER, ROBERT SWENSON FP 096
208 N. HERMAN ST. A AC
GOLDSBORO 27530 919 734-5600

MEYERDIERKS, ELIZABETH M. HS /ORS 041
1103 N. ELM ST. A AC
GREENSBORO 27401 919 378-0811

MEYERS, JAMES HOWARD PTH 034
2540 EMPIRE DR. AC
WINSTON-SALEM 27103 919 760-4620

MEYERS, WILLIAM CLARK GS /ABS 032
BOX 3041, DUMC A AC
DURHAM 27710 919 684-6437

MEYERSON, MARTIN BENJAMIN TR 065
PO BOX 4574 AC
WILMINGTON 28406 919 251-1839

MEYMANDI, ASSAD P /N 026
1212 WALTER REED ROAD A P * AC
FAYETTEVILLE 28304 919 485-6166

MEZER, HOWARD CABITT OBG /END 041
301 E. WENDOVER AVE. #400 A AC
GREENSBORO 27401 919 273-2835

MICHAEL, DOUGLAS WORTH FP 018
PO BOX 1239 A AC
CONOVER 28613 704 464-3821

MICHAL, DAVID HILL IM /NEP 049
521 BROOKDALE DR. AC
STATESVILLE 28677 704 878-6640

MICHAL, RICHARD GLENN FP 064
1041 NOELL LANE, STE. 101 AC
ROCKY MOUNT 27804 919 443-3133

MICHAL, WILLIAM NORWOOD, JR. PD 040
624 QUAKER LANE, SUITE 200-A A AC
HIGH POINT 27262

MICHALAK, DANIEL PETER OBG 098
1700 S. TARBORO ST. A AC
WILSON 27893 919 291-9010

MICHALETS, JAMES PATRICK 032
1315 MORREENE RD. #6J R
DURHAM 27705 919 684-8111

MIDDLEBROOK, MARGARET T. 034
1533 BAYCHESTER AVE. S
NORFOLK, VA 23503

MIDDLETON, R. BRUCE GS 034
2915 LYNDHURST AVE. AC
WINSTON-SALEM 27103 919 765-5221

MIKUS, KEVIN PETER FP 018
PO BOX 1239 A AC
CONOVER 28613 704 464-3821

MILAM, WILLIAM FREER PTH 023
PO BOX 1268 A AC
SHELBY 28150 704 487-3147

MILES, DAVID RALPH GS/TS 065
1414 MEDICAL CENTER DR. A AC
WILMINGTON 28401 919 763-7363

MILES, JOHN RALPH, JR. GS /VS 036
211 S. CHESTNUT ST. AC
GASTONIA 28054 704 867-8975

MILL, MICHAEL ROBERT TS /GS 032
UNC, CB 7065 A AC
DIV. OF CARDIOTHORACIC SURGERY
CHAPEL HILL 27599 919 966-3381
FAX 919 966-3475

MILLER, ALMA ELIZABETH P /IM 012
PO BOX 18 AC
BROUGHTON HOSPITAL
MORGANTON 28655 704 637-2729

MILLER, ANDREW CLEVELAND,III FP 036
311 W. THIRD AVENUE AC
GASTONIA 28052 704 865-4231

MILLER, DAVID CHARLES ORS 033
123 HOSPITAL DR. A P AC
TARBORO 27886 919 823-7212

MILLER, DAVID EDMOND CD /IM 032
CENTRAL MEDICAL PARK A * AC
2609 N. DUKE ST., STE. 403
DURHAM 27704 919 471-8441

MILLER, DAVID EDWARD OBG 092
5216 DEERCHASE TR. AC
WAKE FOREST 27587 919 755-8976

MILLER, DONALD STUART /HEM 023
1405-B N. LAFAYETTE STREET AC
SHELBY 28150 704 482-8936

MILLER, DUDLEY ADM /OBG 026
150 ROBESON STREET A AC
FAYETTEVILLE 28301 919 483-3156

MILLER, EDITH HAMILTON IM /END 060
1350 S. KINGS DRIVE AC
CHARLOTTE 28207 704 372-8750

MILLER, EMERY CLYDE, JR. END /IM 034
1905 W. FIRST ST. A L/RT
WINSTON-SALEM 27104 919 723-5636

MILLER, GEORGE JOHN, JR. ORS 007
1207 HIGHLAND DRIVE A P AC
WASHINGTON 27889 919 946-6513

MILLER, GEORGE ROLFE ORS 036
1040 PARAMOUNT CIR. A L/RT
GASTONIA 28052 704 865-6487

MILLER, HAROLD MELTON EM /FP 013
4367 WEDDINGTON RD. AC
CONCORD 28025 704 786-2111

MILLER, HENRY SHELTON, JR. CD /IM 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-4467

MILLER, HERSEY EUGENE OTO /HNS 049
707 BRYANT ST. A AC
STATESVILLE 28677 704 873-5224

†MILLER, HORACE WILLIAM, JR. IM /CD 026
1766 METROMEDICAL DR.
DECEASED--11-20-90
FAYETTEVILLE 28304 919 483-7090

MILLER, HORACE WM. MARK, IV PS 026
117 MAGNOLIA AVE. P AC
FAYETTEVILLE 28305 919 323-1203
FAX 919 483-1130

MILLER, HOWARD EDWARD ORS 001
723 EDITH STREET AC
BURLINGTON 27215 919 227-4256

MILLER, IRA BEN IM 040
1312 LONG ST., STE. 103 A AC
HIGH POINT 27262 919 884-5888

MILLER, JOEL BYRON OBG 018
P. O. DRAWER 38 AC
HICKORY 28603 704 322-4140
FAX 704 322-3767

MILLER, JOSEPH KEITH N 040
606 N. ELM ST. A AC
HIGH POINT 27262 919 889-8877
FAX 919 885-2060

MILLER, JOSHUA SETH AN 060
PO BOX 32861 A P AC
CHARLOTTE 28232 704 377-5772

MILLER, LARRY ROBERT PTH 034
300 S. HAWTHORNE RD. AC
DEPT. OF PATHOLOGY
WINSTON-SALEM 27103 919 748-2637

MILLER, MARK F. 032
1106 N. DUKE ST. #A R
DURHAM 27701 919 682-6033

MILLER, MICHAEL JOHN IM /CD 032
BOX 31040, DUMC A R
DURHAM 27710 919 684-8111

MILLER, MICHAEL RAY FP 049
750 HARTNESS RD., STE. E AC
STATESVILLE 28677 704 872-0174

MILLER, NORMAN ERIC END /IM 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-2076

MILLER, ORLANDO PHIL ORS 092
P. O. BOX 10707 A AC
RALEIGH 27605 919 781-5600

MILLER, PAUL KING 034
111 DALEWOOD DR. #2 A S
WINSTON-SALEM 27104

MILLER, PHILIP RAIFORD IM /CD 092
3100 BLUE RIDGE RD. P AC
RALEIGH 27612 919 781-7500

MILLER, ROBERT EVANS ORS 060
825 ARDSLEY RD. * L/RT
CHARLOTTE 28207 704 373-0544

MILLER, ROBERT MICHAEL FP 023
1198 WYKE ROAD AC
SHELBY 28150 704 487-1148
FAX 204 487-7753

MILLER, STEPHEN MAURICE FP /EM 041
603 DOLLY MADISON AC
GREENSBORO 27410 919 294-6190

MILLER, WALTON H., JR. GS /GYN 096
618 BROOKWOOD LANE A L/RT
GOLDSBORO 27530 919 734-1141

MILLER, WILLIAM CAREY, JR. R 026
1653 BANBURY DRIVE AC
FAYETTEVILLE 28304 919 484-6881

MILLER, WILLIAM STACEY D 092
3803-A COMPUTER DR. A AC
RALEIGH 27609 919 782-2152

MILLIGAN, RICHARD PATRICK IM 056
8 RIVERVIEW ST., STE. 101 A AC
FRANKLIN 28734 704 369-4158

MILLING, JAMES REAVES FP 044
718 BRUNSWICK DRIVE AC
WAYNESVILLE 28786 704 456-5566

MILLNS, DALE THOMAS U 025
213 JOHNSON ST. L/RT
NEW BERN 28560 919 637-4788

MILLS, JOHN FRANKLIN FP 091
RUIN CREEK ROAD AC
HENDERSON 27536 919 492-3152

MILLS, MICHAEL KENNETH OBG 034
3402 DONEGAL DR. AC
CLEMMONS 27012 919 766-8697

MILLS, RANDOLPH DENNIS FP 091
RUIN CREEK RD. AC
MEDICAL ARTS CTR.
HENDERSON 27536 919 492-3152

MILLS, STEPHEN ALAN CDS /TS 034
3320 PADDINGTON LANE A AC
WINSTON-SALEM 27106 919 748-4488

MILLS, WARDELL HARDEE OPH 041
1202 COUNTRY CLUB DRIVE A L/RT
GREENSBORO 27408 919 274-3391

MILLWARD, DAVID KENT CD /IM 092
3320 WAKE FOREST RD. AC
RALEIGH 27609 919 872-4850

MILNER, THOMAS HAMILTON, III DR 034
3155 MAPLEWOOD AVENUE A AC
WINSTON-SALEM 27104 919 773-3877

MILTICH, MICHAEL FIEGEL OTO /HNS 060
1600 E. THIRD STREET * AC
CHARLOTTE 28204 704 358-4120

MILTON, BERNARD GERALD FP 084
123 W. THIRD ST. A P AC
OAKBORO 28129 704 983-4590

MILTON, CECIL JEROME ORS 060
1718 E. FOURTH ST. STE. 701 A * AC
PRESBYTERIAN MEDICAL TOWER
CHARLOTTE 28204 704 334-0809

MILTON, DAVID THOMAS DR 011
445 BILTMORE, STE. 301 A AC
ASHEVILLE 28801 704 255-5161

MIMS, GROVER RAY, III AN 034
2580 COUNTRY CLUB ROAD A AC
WINSTON-SALEM 27104 919 748-5555

MINARD, RAYMOND BRUCE AN 074
3608 COVENTRY CT. A AC
GREENVILLE 27858 919 756-9168

MINCEY, GREGORY JULIAN OPH 063
2170 MIDLAND ROAD AC
SOUTHERN PINES 28387 919 295-2100

MINICK, RUSSELL CLARK FP 034
1504 WILLIAMS RD. AS
LEWISVILLE 27023

MINKIN, BRUCE IRVING HS 011
20 MCDOWELL ST. A AC
ASHEVILLE 28801 704 258-0847

MINOGUE, MICHAEL F. 032
213-A BRIDGEFIELD PL. A S
DURHAM 27705 919 383-7721

MINTZ, ROBERT DAVID R 036
PO BOX 1495 A AC
GASTON RADIOLOGY, PA
GASTONIA 28054 704 864-4378

MINTZ, RUDOLPH IVEY, JR. GYN 054
1906 STANTON ROAD AC
KINSTON 28501 919 527-5500

MINUS, JOSEPH SHEPPARD PD 023
101 GROVER STREET A AC
SHELBY 28150 704 482-1435

MISAS, JOSE ENRIQUE OBG/GO 074
ECU, DEPT. OF OB-GYN AC
GREENVILLE 27858 919 551-4201

MITCHELL, BRIAN P. IM 020
PO BOX 158 AC
MURPHY 28902 704 837-2696

MITCHELL, CALVIN HARRISON OPH 032
BOX 3802, DUKE UNIV. EYE CTR. A * AC
DURHAM 27710 919 684-3771

MITCHELL, JOHN SCOTT FP 064
1041 NOELL LANE, STE. 101 AC
ROCKY MOUNT 27804 919 443-3133

MITCHELL, JOYCE MARIE EM /IM 074
DEPT. OF EMERGENCY MED. A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4757

MITCHELL, LANDIS PATTERSON FP 081
113 W. MAIN ST. A * L
SPINDALE 28160 704 286-2391

MITCHELL, LEWIS DEAN FP 041
301 E. WENDOVER AVE., STE. 310 AC
GREENSBORO 27401 919 379-1156

MITCHELL, NEIL PATRICK P 026
1285 OLIVER ST. A AC
FAYETTEVILLE 28304 919 484-4126

MITCHELL, WILLIAM E. GS /GP 087
P. O. BOX 760 AC
BRYSON CITY 28713 704 488-2283

MITCHENER, CALVIN CHAMBERS D 060
1600 E. FIFTH STREET A P AC
CHARLOTTE 28204 704 376-1523

MITCHENER, JAMES SAMUEL, JR. GS 083
P. O. BOX 1808 A AC
LAURINBURG 28353 919 276-3541

MIYAKE, CAROL ELIZABETH IM /END 032
10 SEDGEWOOD RD. AC
CHAPEL HILL 27514 919 479-6270

MIYAZAKI, DOUGLAS WAYNE 034
204 RIDGEHAVEN DR. S
WINSTON-SALEM 27104 919 724-6594

MOBLEY, THOMAS BARNETT, III U 065
236 BEACH ROAD, NORTH A AC
WILMINGTON 28405 800 682-7971

MOCK, DAVID CARLTON GP 029
PO BOX 583, RT. #3 L/RT
LEXINGTON 27292 704 787-4492

MODEST, VICKI ELLEN 034
300 S. HAWTHORNE RD. S
STUDENT BOX
WINSTON-SALEM 27103

MODROW, PETER ALBERT AN /P 092
805 FAULKNER PLACE A AC
RALEIGH 27609 919 876-0581

MOELLER, ARLYN MCCLAY FP 026
118 POMPTON DRIVE AC
FAYETTEVILLE 28304 919 424-6104

MOELLER, GARLAND RADFORD RHU /IM 025
532 WEBB BLVD. A AC
HAVELOCK 28532 919 447-7088

MOELLER, MARK BOLTON ID /IM 025
P. O. BOX 68 A AC
POLLOCKSVILLE 28573 919 633-1010

MOELLER, MICHAEL JOHN IM /CD 065
1515 DOCTORS CIRCLE AC
WILMINGTON 28401 919 763-5182

MOELLER, WENDY PAULSON GE /IM 025
P. O. BOX 68 AC
POLLOCKSVILLE 28573 919 633-1010
FAX 919 633-1010

MOFFATT, ELIZABETH JAYNE 032
910 CONSTITUTION DR. 3305 R
DURHAM 27705 919 684-5112

MOFFATT, ROBERT CARR ON /GS 011
445 BILTMORE CTR., STE.102 A * AC
ASHEVILLE 28801 704 258-2464

MOFRAD, ALI SABOORTINAT PD /PHO 055
113 DOCTORS PARK AC
LINCOLNTON 28092 704 735-1441

MOHAMED, ADEL WAGDI U 051
415 N. SEVENTH STREET A AC
SMITHFIELD 27577 919 934-5955

MOHEREK, ROBIN MARIE 074
329 LINDSAY DR. #5-I S
GREENVILLE 27834 919 355-8718

MOHR, JACK ELMER OBG 032
706 WELLINGTON DRIVE AC
CHAPEL HILL 27514 919 967-1441

MOHR, LINDA CHAPPELL OBG 092
3220 WAKE FOREST RD. A AC
RALEIGH 27609 919 876-8225

MOKRIS, JEFFREY GEORGE ORS 060
1001 BLYTHE BLVD., #200 A P AC
CHARLOTTE 28203 704 373-0544

MOLTER, DARRON JOSEPH FP 035
98 BULLOCK ST. A AC
FRANKLINTON 27525 919 494-1000

MOLTER, DAVID W. OTO 032
2730 MONTGOMERY ST. A R
DURHAM 27705 919 684-8111

MONCLA, ALFRED MARIE OBG 070
1134 N. ROAD STREET AC
ELIZABETH CITY 27909 919 338-2151

MONG, JAMES ARTHUR OBG 092
4420 LAKE BOONE TR., STE. 302 AC
RALEIGH 27607 919 832-5529

MONROE, CHARLES T. PD /PH 074
1825 W. SIXTH ST. AC
GREENVILLE 27834 919 752-4141

MONROE, CLEMENT ROSENBURG GS 063
1475 MIDLAND RD. A L/RT
#18 MIDDLETON PL.
SOUTHERN PINES 28387 919 692-4888

MONROE, EDWIN WALL IM 074
1257 KENT PLACE LN. A P * AC
WINSTON-SALEM 27104 919 723-1456

MONROE, GEORGE CLARKE, III IM 013
470 LAKE CONCORD RD. AC
CONCORD 28025 704 786-7122

MONROE, JOHN HOWARD GYN 034
236 PLYMOUTH AVE. L/RT
WINSTON-SALEM 27104 919 765-2802

MONROE, JOHN LAUCHLIN OTO /HNS 063
PINEHURST SURGICAL CLINIC A AC
PINEHURST 28374 919 295-2161

MONROE, JOHN THADDEUS, JR. P /PYA 032
1829 E. FRANKLIN ST., 1100-A A AC
CHAPEL HILL 27514 919 967-5289

MONROE, LANCE TRUMAN OBG /OBS 013
476 CAMROSE CIRCLE, NE A L
CONCORD 28025 704 782-3717

MONROE, WILLIAM MURCHISON OPH 074
DOCTORS PK, STE. I A AC
STANTONSBURG ROAD
GREENVILLE 27834 919 758-4166

MONSON, DONALD MALVIN R 073
PO BOX 309 A AC
ROXBORO 27573 919 597-9101

MONSON, ROBERT CHARLES, II GS /VS 060
3535 RANDOLPH RD., STE. 201-W AC
CHARLOTTE 28211 704 364-8100

MONSON, STEVEN ROBERT EM 060
1000 BLYTHE BLVD. C
CHARLOTTE 28232 704 355-3181

MONTANA, GUSTAVO SANTOS TR 032
DUMC-RADIATION ONC. A AC
DURHAM 27710 919 684-6183
FAX 919 684-3953

MONTEITH, LINDA GAIL 074
DOCTORS PARK APTS. L14 S
GREENVILLE 27834 919 758-2124

MONTERO-PEARSON, PER M. GS 034
PO BOX 407 AC
MOCKSVILLE 27028 704 634-6121

MONTES, ANITA CLAIRE OBG 018
210 13TH AVE. PL. NW AC
HICKORY 28601 704 322-3017

MONTGOMERY, JAMES HUGH R /IM 011
445 BILTMORE CTR., STE. 301 A * AC
ASHEVILLE 28801 704 255-3565

MONTGOMERY, STEPHEN PAUL ORS 092
P. O. BOX 10707 A AC
RALEIGH 27605 919 781-5600

MONTGOMERY, WAYNE SWOPE ORS 011
129 MCDOWELL ST. AC
ASHEVILLE 28801 704 258-8800

MONTGOMERY, WILLIAM GARDNER U 034
2932 LYNDHURST AVE. A AC
WINSTON-SALEM 27103 919 765-4021

MOODY, DIXON MCGUIRE DR 034
BOWMAN GRAY-RADIOLOGY AC
WINSTON-SALEM 27103 919 748-4435
FAX 919 748-2029

MOON, JAMES PATRICK OBG 013
1054 BURRAGE RD. NE A AC
CONCORD 28025 704 788-4151

MOON, RICHARD E. AN /PUD 032
BOX 3094, DUMC A AC
DURHAM 27710 919 681-5805

MOON, SAMUEL DAVID OM 032
106 BASKERVILLE CIRCLE R
CHAPEL HILL 27514 919 286-3232

MOORE, ARL VAN, JR. DR 060
CHARLOTTE RADIOLOGY A * AC
PO BOX 36937
CHARLOTTE 28236 704 365-0343
FAX 704 362-7081

MOORE, CAROL ANN 074
106 SCALES PL. #M-5 A R
GREENVILLE 27834 919 753-2015

MOORE, DAVID HARRY GYN /ON 032
UNC, DIV. OF GYN-ONC A * AC
CB 7570, MACNIDER BLDG.
CHAPEL HILL 27599 919 966-1195

MOORE, DAVID HUDDLER PD /ID 060
7110 LAWYERS ROAD AC
CHARLOTTE 28227 704 568-6500

MOORE, DONALD WILSON FP 079
401 W. DECATUR ST. AC
MADISON 27025 919 548-9618

MOORE, EDWARD EUGENE OPH 011
3 DOCTOR'S PARK L
ASHEVILLE 28801 704 252-6741

MOORE, FREDERICK E. FP 001
RT. #1, BOX 259 AC
PROVIDENCE 27315 919 694-4129

MOORE, GEORGE HORACE FP 092
833 DURHAM RD., STE. C AC
WAKE FOREST 27587 919 556-6762

MOORE, GLENNDALE 092
PO BOX 28510 AC
RALEIGH 27611 919 828-3466

MOORE, HORACE GREELEY, JR. GS /TS 065
1414 MEDICAL CENTER DRIVE A AC
WILMINGTON 28401 919 763-7363

MOORE, JACK CLARK, II FP 013
888 N. CHURCH ST. A AC
CONCORD 28025 704 786-3122

MOORE, JEFFREY KEVIN ORS 016
15 MEDICAL PARK AC
MOREHEAD CITY 28557 919 247-2101

MOORE, JOHN ANDREW IM /RHU 041
1511 WESTOVER TERRACE AC
GREENSBORO 27408 919 373-0951

MOORE, JOHN HERBERT, III GE /IM 060
2015 RANDOLPH RD. #208 A AC
CHARLOTTE 28207 704 377-4009

MOORE, LAWRENCE WHITE, JR. OPH 032
1110 W. MAIN STREET AC
DURHAM 27701 919 682-9341

MOORE, PAUL MILTON, JR. FP 007
619 E. 12TH STREET AC
WASHINGTON 27889 919 946-1146

MOORE, PIERCE JONES, JR GS 045
#1 P.J.'S PLACE A L
HENDERSONVILLE 28792 704 687-0355

MOORE, RALPH BRYAN, JR. PD 065
CHILDREN'S CLINIC AC
1920 16TH STREET
WILMINGTON 28401 919 763-2072

MOORE, ROBERT ALEX, JR. NS 065
1404 MEDICAL CENTER DRIVE AC
WILMINGTON 28401 919 763-6578

MOORE, ROBERT ALEXANDER, III IM /NEP 065
1302 MEDICAL CENTER DR. A * AC
WILMINGTON 28401 919 343-9800

MOORE, ROBERT MORGAN ORS 065
2001 S. 17TH STREET AC
WILMINGTON 28401 919 763-7344

MOORE, RONALD ALVIN IM /ON 025
702 NEWMAN ROAD A AC
MCCARTHY SQUARE
NEW BERN 28560 919 633-5333

MOORE, STALEY COOK FP 025
810 KENNEDY AVE. A AC
NEW BERN 28560 919 633-1678

MOORE, THOMAS JOSEPH ORS 060
1001 BLYTHE BLVD., #200 A AC
CHARLOTTE 28203

MOORE, THOMAS PHILLIP R 067
ONSLOW MEMORIAL HOSPITAL A AC
JACKSONVILLE 28540 919 577-2274

MOORE, THOMAS ROBERT 032
510 E. FRANKLIN ST. A S
CHAPEL HILL 27514 919 942-6406

MOORE, WILLIAM DONALD FP 043
PO BOX 819 * L
COATS 27521 919 897-6423

MOORE, WILLIAM LOCKE PD 041
616 PASTEUR DRIVE A AC
GREENSBORO 27403 919 292-1353

MOOREFIELD, WM. GUERRANT, JR. ORS 060
120 PROVIDENCE ROAD A AC
CHARLOTTE 28207 704 377-0351

MOORING, FRANKLIN J. DR 081
PO BOX 886 AC
RUTHERFORDTON 28139 704 287-2984

MOORING, STEWART LEE R /NM 081
RUTHERFORD HOSPITAL DE
RUTHERFORDTON 28139 704 286-5232

MOORMAN, CLAUDE T., III ORS 032
3227 COACHMAN'S WAY R
DURHAM 27705 919 684-8111

MOOSE, NANCY ELIZABETH 074
121 HUNTINGRIDGE RD. A * S
GREENVILLE 27834 919 830-5172

MORADIAN, GLENN PETER R 026
1329 ROBESON ST. C
FAYETTEVILLE 28304 919 323-2012

MORAN, DEBORAH HOLDEN AN 034
300 S. HAWTHORNE RD. A AC
DEPT. OF ANES.
WINSTON-SALEM 27103 919 760-5259

MORCOS, VICTOR HANNA P 041
522 N. ELAM AVE., STE. 203 AC
GREENSBORO 27403 919 854-2391

MOREHEAD, ROBERT PAGE PTH 034
1051 ARBOR ROAD A L/RT
WINSTON-SALEM 27104 919 722-2879

MORELL, ROBERT CRAIG AN 034
300 S. HAWTHORNE RD. AC
DEPT. OF ANESTHESIA
WINSTON-SALEM 27103 919 748-4498

MORELL, VENITA WEAVER FP 034
300 S. HAWTHORNE RD. A C
WINSTON-SALEM 27103 919 748-4479

MORESCHI, RAFAEL MARIANO IM /CD 092
105-A KILMAYNE DR. A P AC
CARY 27511 919 467-2253

MORESS, RALPH LOUIS P 026
P. O. BOX 2068 A P AC
FAYETTEVILLE 28302 919 323-0601

MORETZ, FRANK HANNON AN 011
202 DOCTOR'S BUILDING A AC
ASHEVILLE 28801 704 254-1969

MORETZ, JOSEPH ALFRED,III ORS 018
250 18TH ST. CIRCLE, SE AC
HICKORY 28602 704 322-5172

MOREWITZ, NANCY D. N 018
420 N. CENTER ST. A AC
HICKORY 28601 704 327-0553

MORGAN, BENJAMIN EDWARD GYN 064
200 NASH MEDICAL ARTS MALL A AC
ROCKY MOUNT 27801 919 443-5941
FAX 919 443-7059

MORGAN, HERMAN GRADY, JR. PD 065
1920 S. 16TH ST. AC
WILMINGTON 28401 919 762-3942

MORGAN, JAMES SILL GE /IM 011
30 CHOCTAW ST. AC
ASHEVILLE 28801 704 254-0881

MORGAN, JOEL CLARENCE CDS /TS 034
2827 LYNDHURST AVE.,STE. 205 A AC
WINSTON-SALEM 27103 919 768-9510

MORGAN, JOHN GARLAND GS /VS 033
101 CLINIC DR. A AC
TARBORO 27886 919 823-2105

MORGAN, NANCY ELAINE FP 014
401 MULBERRY ST., SW, STE. 200 AC
LENOIR 28645 704 754-0707

MORGAN, RALPH SILER CD /IM 050
PO BOX 328 A L/RT
WEBSTER 28788 704 586-2134

MORGAN, RICHARD EARL GS 025
701 NEWMAN RD. AC
NEW BERN 28562 919 633-2081
FAX 919 633-3446

MORICLE, CHARLES HUNTER GS /ABS 079
1223 CRESCENT DR. A L/RT
REIDSVILLE 27320 919 349-8590

MORRELL, ROBERT X., JR. PM 092
3000 NEW BERN AVE. AC
WAKE REHABILITATION HOSPITAL
RALEIGH 27610 919 250-8757
FAX 919 250-8791

MORRIS, ARTHUR SHERMAN, JR. OBG 011
80 VICTORIA ROAD A AC
ASHEVILLE 28801 704 255-8900

MORRIS, DAVID PERRY AM 060
6958 FOLGER DR. A AC
CHARLOTTE 28226 704 364-4798

MORRIS, GEORGE THOMAS ARNOLD IM 001
711 HERMITAGE ROAD A AC
BURLINGTON 27215 919 226-9317

MORRIS, JAMES FRANCIS PD 096
P. O. BOX 1153 AC
GOLDSBORO 27530 919 734-4014

MORRIS, JAMES JOSEPH, JR. CD /IM 032
BOX 2993, DUMC AC
DURHAM 27710 919 684-4329

MORRIS, JOHN LOUIS FP 051
PO BOX 699 AC
BENSON 27504 919 894-2011

MORRIS, KENNY JORDAN R 065
216 OYSTER BAY LN. A AC
WILMINGTON 28409 919 343-7069

MORRIS, LESLIE MORGAN R 036
3636 BRENTWOOD DR. A L/RT
GASTONIA 58056 704 865-4430

MORRIS, MARSHALL G., JR. GS /TS 041
806 NOTTINGHAM DR. L/RT
GREENSBORO 27403

MORRIS, MARY LIDE R /NM 001
440 CEDARWOOD DRIVE A AC
BURLINGTON 27215 919 584-9872

MORRIS, RAE HENDERSON GS 013
111 LOUISE DRIVE, S.E. A L/RT
CONCORD 28025 704 782-4918

MORRISEY, LEMONT FP 001
723 EDITH STREET AC
BURLINGTON 27215 919 229-4791

MORRISON, FRANK CRAWFORD GP 044
P. O. BOX 1549, MEDICAL BLDG. A AC
CANTON 28716 704 648-5215

MORRISON, HUGH MAXWELL, JR. OPH 063
P. O. BOX 460 A P * AC
PINEHURST 28374 919 295-6809

MORRISON, LEON MACMILLAN OBG 016
16 MEDICAL PARK AC
MOREHEAD CITY 28557 919 247-4297

MORRISON, ROBERT HOLCOMBE OBG 026
331 FAIRFIELD RD. A L/RT
FAYETTEVILLE 28303 919 867-1044

MORRISON, ROGER WILLIAM PTH /CLP 011
4 LUCKY LANE A L/RT
ASHEVILLE 28804 704 252-4868

MORROW, JERRY F. P 026
CUMBERLAND HOSPITAL * AC
FAYETTEVILLE 28309 919 485-7181

MORROW, JOHN HOWARD FP 049
PO BOX 727 A C
TROUTMAN 28166 704 528-3846

MORROW, PHILLIP RAY, JR. 034
2153 ROYAL DR. S
WINSTON-SALEM 27103 919 476-5460

MORROW, SARAH TAYLOR PH /PD 092
3304 WADE AVE. * AC
RALEIGH 27607 919 851-8888

MORTON, DUNCAN, JR. PDS 060
2104 RANDOLPH ROAD AC
CHARLOTTE 28207 704 377-3900

MOSELEY, JAMES RENNIE FP 092
340 N. MAIN STREET AC
WAKE FOREST 27587 919 556-4826

MOSELEY, ROBERT GALLOWAY PD 092
BOX 7304, NCSU-S.H.S. AC
RALEIGH 27695 919 737-2563

MOSELEY, WALTON STROZIER 032
RT. #7, BOX 210-G S
RALEIGH 27614 919 286-3311

MOSER, WADE HAUSER, JR. DR 092
CAPITAL RADIOLOGY ASSOC. A AC
P. O. BOX 17947
RALEIGH 27619 919 847-8564

MOSES, JOHN W., JR. PD 032
1210 MANGUM ST. AC
DURHAM 27701 919 688-5463

MOSKOWITZ, MARK SANDERS GS /VS 036
1089 X-RAY DR. AC
GASTONIA 28054 704 864-8377
FAX 704 867-3179

MOSS, GEORGE OREN GP /PH 081
ROUTE #1, BOX 397JJ A L/RT
BOSTIC 28018 704 245-2853

MOSS, PAUL N. GP 014
C-29-6,167 HUNTINGTON DR. AC
HUDSON 28638 704 728-3943

MOSS, THOMAS M. FP 023
123 W. MARION ST. AC
SHELBY 28150 919 481-1019

MOSTELLAR, HENRY CURTIS, III GS 025
701 NEWMAN RD. AC
NEW BERN 28562 919 633-2081
FAX 919 633-3446

MOTUZ, DANIEL JOHN AN 060
9718 PALLISERS TER. A AC
CHARLOTTE 28210 704 379-5943

MOTYL, PAQUI DENISE 032
200 WESTMINSTER DR. APT. 114-J R
CHAPEL HILL 27514 919 966-1042

MOUNTJOY, JOHN ROBERT OTO 034
1420 PLAZA DRIVE AC
WINSTON-SALEM 27103 919 765-4922

MOVAHED, ASSAD CD /NM 074
SECTION OF CARDIOLOGY AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4651
FAX 919 551-5884

MOYLAN, JOSEPH ANTHONY GS /VS 032
BOX 3947, DUMC A AC
DURHAM 27710 919 684-2237

MOZINGO, GEORGE WM.,III U 078
101 W. 27TH ST. AC
LUMBERTON 28358 919 738-7166

MUELLER-HEUBACH, EBERHARD OBG /MFM 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-4594

MUENCH, LAURENCE WALTER AN 023
310 DOWNING DR. A AC
KINGS MOUNTAIN 28086 704 739-4683

MUGHARBIL, ZIYAD H. U 020
MURPHY MEDICAL CENTER A AC
PHYSICIANS BLDG.
MURPHY 28906 704 837-7513

MUKAMAL, RONALD SASSON GS /ORS 024
333 JEFFERSON STREET AC
WHITEVILLE 28472 919 642-2336

MULHAUSEN, PAUL LOEWE IM 032
BOX 3211, DUMC R
DURHAM 27710 919 684-8111

MULHOLLAND, JAMES VINCENT PD /PD 010
PO BOX 1208 AC
SHALLOTTE 28459 919 754-8117

MULL, RICHARD T. DR 018
920 TATE BLVD., SE., STE. 112 A AC
PIEDMONT MEDICAL IMAGING
HICKORY 28602 704 327-6342
FAX 704 327-0304

MULLEN, DONALD COLLINS CDS /TS 000
207 LOETSCHER PL. #5B RT
PRINCETON, NJ 08540 803 886-6544

MULLER, PETER GS 064
1041 NOELL LN., STE. 102 A C
ROCKY MOUNT 27804 919 443-0026

MULLINS, ALAN PHILLIP
1540 GARDEN TERR. #201 R
CHARLOTTE 28211

MULLINS, TIMOTHY L. U 040
624 QUAKER LN. STE. E-100 A AC
HIGH POINT 27262 919 886-5151

MULLIS, DONALD LEE ORS 011
111 VICTORIA ROAD A AC
ASHEVILLE 28801 704 252-7331

MULLIS, WILLIAM FRANK PS /GS 060
2215 RANDOLPH ROAD A AC
CHARLOTTE 28207 704 372-6846
FAX 704 342-0752

MULVANEY, GERALD GARFIELD OBG 092
9925 KOUPELA DR. AC
RALEIGH 27614 919 755-8535

MUMFORD, LARRY PD /NPM 032
3115 ACADEMY ROAD A AC
DURHAM 27707 919 489-1976

MUNDLE, LINDA BICK P 060
RT. #1, BOX 193 AC
MOORESVILLE 28115 704 896-8612

MUNDORF, GEORGE P 060
6001 HEMBY ROAD L/RT
MATTHEWS 28105 704 846-1276

MUNDY, JOHN CHRISTIAN OTO * 041
1309 N. ELM ST. C
GREENSBORO 27401 919 273-9932

MUNN, ALBERT R., III OPH 092
3900 WAKE FOREST RD. A AC
RALEIGH 27609 919 872-3242

MUNROE, JOHN FRANCIS IM /END 024
BALDWIN WOODS, S.W. AC
P. O. BOX 1249
WHITEVILLE 28472 919 642-2230

MUNT, ROBERT LAWRENCE, JR. PD 092
4505 FAIR MEADOWS LN. #101 A AC
RALEIGH 27607 919 787-5495

MURINSON, DONALD S. ON /HEM 041
1511 WESTOVER TERRACE AC
GREENSBORO 27408 919 373-0611

MURPHREE, DUAINE D. FP 034
300 S. HAWTHORNE RD. R
DEPT. OF FAMILY MED.
WINSTON-SALEM 27103 919 748-6249

MURPHY, BARBARA ANNE EM 074
DEPT. OF EMERGENCY MED. AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858

MURPHY, DANIEL F. ORS /SM 041
809 GREEN VALLEY RD. A * AC
GREENSBORO 27408 919 275-3325
FAX 919 275-5346

MURPHY, DANIEL WM. GE 034
1901 S. HAWTHORNE RD.,STE. 310 A * AC
WINSTON-SALEM 27103 919 760-4340

MURPHY, MAUREEN E. FP 036
421 E. CATAWBA ST. AC
BELMONT 28012 704 825-4750

MURPHY, MICHAEL D. 034
5911 N. LOVERS LANE RD. #107 S
MILWAUKEE, WI 53225

MURPHY, ROBERT JENNINGS, JR. FP /PD 032
1016 ORANGE HIGH SCHOOL RD. A * L
HILLSBOROUGH 27278 919 732-9314

MURPHY, THOMAS LYNCH GE /GE 080
409 MOCKSVILLE AVE. A L/RT
SALISBURY 28144 704 633-8780

MURPHY, THOMAS LYNCH, JR. IM /PUD 036
1021 X-RAY DR. A AC
GASTONIA 28054 704 867-2341

MURRAY, B. SHARON GS 060
101 W. T. HARRIS BLVD. AC
SUITE B-211
CHARLOTTE 28213 704 547-0834

MURRAY, JANE H. FP 032
5501 FORTUNE'S RIDGE DR. AC
DURHAM 27713 919 471-2571

MURRAY, JOHN CARROLL D 032
BOX 2907, DUMC AC
DURHAM 27710 919 684-2393

MURRAY, JOHN P. OTO 084
PO BOX 819 A AC
ALBEMARLE 28001 704 983-6950

MURRAY, PAUL MICHAEL 034
1051 S. HAWTHORNE RD. A R
WINSTON-SALEM 27103 919 748-2011

MURRAY, ROBERT FULTON, III AN 018
415 N. CENTER ST., STE. 103 A AC
HICKORY 28601 704 327-8105

MURRAY, ROBERT J., JR. RO 041
14 SOMMERTON DR. AC
GREENSBORO 27408 919 379-3878

MURRAY, WILLIAM GRAY IM 041
1808 CARLISLE ROAD A L/RT
GREENSBORO 27408 919 274-5155

MURRAY, WILLIAM JAMES AN /PA 032
BOX 3094, DUMC A AC
DURHAM 27710 919 684-2569

MURTUZA, SARWAR IM /FP 026
USAF CLINIC C
POPE AFB 28308 919 394-2288

MUSS, HYMAN BERNARD ON /HEM 034
BOWMAN GRAY, DEPT. OF MED. A AC
WINSTON-SALEM 27103 919 748-4397
FAX 919 748-4204

MUSSELWHITE, NEILL HECTOR,III FP * 065
1960 S. 16TH ST. AC
WILMINGTON 28401 919 251-9977

MUTHER, ELLIS FRANK N /P 025
PO BOX 2588 A AC
NEW BERN 28561 919 633-3744

MUTTON, THOMAS PAUL GS /VS 034
2933 MAPLEWOOD AVENUE AC
WINSTON-SALEM 27103 919 768-9198

MYERS, DAN ALLEN U 054
1413 ST. JAMES PLACE A AC
KINSTON 28501 919 527-3043

MYERS, GEORGE HUNTER 032
112 HIDDEN VALLEY DR. R
CHAPEL HILL 27516 919 966-1042

MYERS, RICHARD STANTON GS /TS 092
2800 BLUE RIDGE BLVE. AC
STE. 305-3
RALEIGH 27607 919 781-7414

MYERS, RICHARD THOMAS GS /TS 034
613 GLEN ECHO TRAIL L/RT
WINSTON-SALEM 27106 919 748-4541

MYNATT, RICHARD JOSEPH U 065
1905 GLEN MEADE RD. A AC
WILMINGTON 28403 919 763-6251
FAX 919 763-7408

MYRACLE, JOHN HOBART PD /PDC 034
250 CHARLOIS BOULEVARD AC
WINSTON-SALEM 27103 919 768-4730

MYRICK, WILLIAM GLENN IM 034
3115 TURKEY HILL RD. A RT
WINSTON-SALEM 27106 919 765-3806

NACHAMIE, DAVID A. U 055
117-B DOCTORS PARK AC
PO BOX 937
LINCOLNTON 28093 704 732-2661

NADEL, SCOTT MARTIN IM /PUD 041
520 N. ELAM AVE. AC
GREENSBORO 27403 919 547-1700

NAGEL, DONALD CHARLES FP /ALD 011
ALCOHOL AND DRUG ABUSE A AC
TREATMENT CTR., PO BOX 1441
BLACK MOUNTAIN 28711 704 669-3424

NAGTEL, A. JACKSON, JR. 032
104 BRADFORD PL. A R
CHAPEL HILL 27514 919 966-5711

NAIK, SOMNATH PUD 078
4384 FAYETTEVILLE RD. A AC
PO BOX 947
LUMBERTON 28358 919 738-1141

NAILLING, RICHARD CABOT GS /GYN 011
5 DOCTOR'S PARK A L
ASHEVILLE 28801 704 254-6381

NAKAMOTO, RONA KEIKO AN 063
722 HIGHLAND DR. AC
SANFORD 27330 919 295-4661

NAMAN, CARL HAWKINS GS /VS 023
1200 HARDIN DRIVE A P AC
SHELBY 28150 704 481-9131

NANCE, CHARLES LEE, JR. ORS 065
2001 S. 17TH STREET AC
WILMINGTON 28401 919 763-7344

NANCE, JOHN WESLEY FP 082
403 FAIRVIEW STREET A L
CLINTON 28328 919 592-6011

NANCE, KEITH VAN ALLEN PTH 074
ECU, DEPT. OF CLINICAL PTH A AC
GREENVILLE 27858 919 551-5912

NANZETTA, LEONARD AN 034
2756 WINDSOR ROAD A L/RT
WINSTON-SALEM 27104 919 768-7572

NAPOLITANO, CHARLES A. 034
1772 HAUSMAN DR. S
WINSTON-SALEM 27103 919 722-7787

NAPPER, CLAY H., JR. 034
2039 CRAIG ST. S
WINSTON-SALEM 27103 919 777-8689

NAPPER, CLAY HUGHES IM 034
2240 CLOVERDALE AVE., #96 AC
WINSTON-SALEM 27103 919 723-0789

NARINS, JOSEPH PAUL OBG 041
301 E. WENDOVER AVE., STE. 400 A C
GREENSBORO 27401 919 273-2835

NASCIMENTO, LUIZ NEP /IM 077
PO BOX 1107 AC
HAMLET 28345 919 895-6521

NASH, CARL WILLIAM R 079
608 LINDEN DRIVE AC
EDEN 27288 919 623-9711

NASH, HOKE SMITH, JR. OTO 060
1600 E. THIRD STREET A AC
CHARLOTTE 28204 704 358-4111

NASH, S. RUSSELL 032
311 S. LASALLE ST., APT. 16L S
DURHAM 27705 919 286-4633

NASH, WILL LIGHT FP 050
34 FISHER CREEK ROAD A AC
SYLVA 28779 704 586-4012

NASHICK, GEORGE HENRY GP 025
PO BOX 729 A AC
PAMLICO MEDICAL CTR., PA
BAYBORO 28515 919 745-3191

NASHOLD, JAMES R. B. 000
1819 GLENDALE AVE. R
DURHAM 27701 401 277-8982

NASRALLAH, NASEEM H. GS 065
PO BOX 548 A AC
BURGAW 28425 919 259-2161

NASSAR, WADDAH N. 000
1442 TREYBROOKE CIR. R
GREENVILLE 27834 919 551-4616

NATHAN, HENRY PAUL GE /IM 044
102 HOSPITAL DRIVE AC
CLYDE 28721 704 452-0331

NATION, ROY GLEN GP /IM 096
407 N. HERMAN STREET AC
GOLDSBORO 27530 919 735-6261

NAUMOFF, PHILIP FP 060
1012 KINGS DRIVE A L/RT
CHARLOTTE 28283 704 334-4665

NAVA, VICTOR MANUEL PS 065
2209 DELANEY AVE. A AC
WILMINGTON 28403 919 763-7617

NAVE, LESTER DAVID, JR. FP 053
555 CARTHAGE ST. A AC
SANFORD 27330 919 774-6518

NAYLOR, LEE ANN A. DR 034
2803 LYNDHURST AVE. A AC
WINSTON-SALEM 27103 919 768-1021

NEAL, ANTHONY CHARLES CD 049
PO BOX 1821 AC
OLD MOCKSVILLE RD.
STATESVILLE 28677 704 878-2011

NEAL, CHARLES BODINE, III PD 032
2919 COLONY ROAD A AC
DURHAM 27705 919 489-9158

NEAL, DEMAR AUSTIN, III GS /CDS 049
1726-B DAVIE AVE. A AC
STATESVILLE 28677 704 873-1024

NEAL, PATRICIA ROSEANNE NPM 060
PO BOX 32861 A C
CHARLOTTE 28232 704 355-3156

NEAL, RUTHERFORD DOUGLAS GS /GYN 060
2214 THETFORD CT. A L/RT
CHARLOTTE 28211 704 365-6541

NEAL, SARA LYNN 034
1318 MADISON AVE. A S
WINSTON-SALEM 27103

NEAL, WALTER ERNEST, JR. OBG 078
4300 FAYETTEVILLE RD. A AC
LUMBERTON 28358 919 738-9601

NEAL, WILLIAM RONALD OBG 041
1507 WESTOVER TERR. AC
GREENSBORO 27408 919 273-3661

NEALE, RICHARD CARROLL, JR. PTH /CLP 012
P. O. BOX 249 A AC
RUTHERFORD COLLEGE 28671 704 879-8767

NEALE, WIRT THOMAS PD 060
149 PROVIDENCE ROAD AC
CHARLOTTE 28207 704 377-5571

NEAVE, VICTORIA C.D. NS 040
606 N. ELM ST. A AC
HIGH POINT 27262 919 889-8877

NEBEL, WILLIAM ARTHUR GYN 032
120 CONNER DR. STE. 101 AC
PO BOX 3317
CHAPEL HILL 27514 919 942-8571

NEBLETT, DONALD THOMAS P 011
932 HENDERSONVILLE RD. A AC
FOREST CENTER, STE. 101
ASHEVILLE 28803 704 274-1415

NEELAND, EUGENE CRAWFORD FP 098
1506 GROVE ST. A L/RT
WILSON 27893 919 237-0626

NEELEY, BRUCE CARLTON P /PYM 032
1911 HILLANDALE RD. STE. 1040 A * AC
DURHAM 27705 919 383-1516

NEELON, FRANCIS ALBERT IM /END 032
BOX 3021, DUMC A AC
DURHAM 27710 919 684-4307
FAX 919 684-8821

NEIJSTROM, ERIC SHERWOOD ON /IM 041
301 E. WENDOVER AVE., STE. 300 A AC
GREENSBORO 27401 919 272-2141

NEILL, JAMES. S. A. PTH 074
ECU SCH. OF MEDICINE A
DEPT. OF CLI. PATHOLOGY
GREENVILLE 27858 919 551-4951

NEIMKIN, RONALD JAY HS 011
20 MCDOWELL ST. A AC
ASHEVILLE 28801 704 253-7521

NEISH, DONALD DEWITT IM /GER 032
DOROTHEA DIX HOSPITAL * AC
S. BOYLAN AVE.
RALEIGH 27611 919 733-5431

NELIUS, SIGRID J. VONRENNER IM /GPM 032
WEST DURHAM STATION A AC
BOX 2899
DURHAM 27715 919 489-6949

NELMS, WALLACE ROYCE, JR. FP 098
RT. #2, BOX 685 AC
WILSON 27893 919 291-2215

NELSEN, KAY M. 034
1900 QUEEN ST. #A3 S
WINSTON-SALEM 27103 919 777-0975

NELSON, DAVID STEPHEN EM /GS 034
248 FLINTSHIRE ROAD A AC
WINSTON-SALEM 27104 919 765-3950

NELSON, LEWIS HENRY, III MFM /GYN 034
BOWMAN GRAY, DEPT. OF OBG AC
WINSTON-SALEM 27103 919 748-4291
FAX 919 748-6937

NELSON, PHILIP GROESBECK P 074
1211 E. ROCK SPRING RD. A L/RT
GREENVILLE 27834 919 752-8118

NELSON, RICHARD ALLAN PD 032
3817 WEST CREST C
DURHAM 27707 919 493-2155

NELSON, ROBERT BARRY ORS 092
P. O. BOX 10707 A AC
RALEIGH 27605 919 781-5600

NELSON, VICKIE LYNN 074
803 PEED DR., APT. 14 A S
GREENVILLE 27834 919 355-6067

NEMEROFF, CHARLES BARNET P 032
BOX 3859, DUMC A AC
DURHAM 27710 919 684-6562

NERNESS, JOHN LAVON EM 045
RT. #11, BOX 134 AC
HENDERSONVILLE 28792 704 693-0736

NERNEY, JOHN JOSEPH OPH 044
116 HOSPITAL DRIVE AC
CLYDE 28721 704 452-5816

NESBIT, FREDERICK P 060
1012 S. KINGS DR., STE. 925 AC
CHARLOTTE 28283 704 333-7722

NESBIT, WILLIAM MICHAEL N 060
2115 E. 7TH ST. A AC
CHARLOTTE 28204 704 333-2853

NESI, MARC HENRY U 041
200 E. NORTHWOOD ST., STE. 206 A AC
GREENSBORO 27401 919 373-0871

NESTOK, BLAKE R. PTH
2121 EL PASEO-12-6 R
HOUSTON, TX 77030 713 792-3108

NESTOR, Z. JONATHAN NEP /IM 083
PO BOX 526 A AC
LAURINBURG 28352 919 276-7727

NETI, SASTRY VISHWANATHA P 080
VA MEDICAL CENTER AC
SALISBURY 28144 704 638-9000

NETTLES, GEORGE STUEARD IM 078
2505 N. ELM STREET AC
LUMBERTON 28358 919 739-2854

NEUFELD, JACOB ALAN 034
300 S. HAWTHORNE RD., BOX 141 A * S
WINSTON-SALEM 27103 919 761-8205

NEUWIRTH, BRYAN RICHARD 032
64-G WILLOW WAY A S
CHAPEL HILL 27516 919 968-6652

NEVILLE, CECIL HOWELL, JR. ORS 063
PINEHURST ORS CLINIC A AC
P. O. BOX 1650
PINEHURST 28374 919 295-1392

NEWBORG, BARBARA IM 032
1503 VIRGINIA AVE. A AC
DURHAM 27705 919 286-2243

NEWELL, ERNEST T. FP /OM 060
22354 COUNTRY CLUB LN. RT
DAVIDSON 28036

NEWELL, HOWARD WILSON, JR. IM 096
2400 WAYNE MEM. DR. AC
GOLDSBORO 27530 919 734-4845

NEWELL, JOHN CHILTON ORS 049
520 BROOKDALE A AC
STATESVILLE 28677 704 872-7492

NEWELL, JOSEPHINE E. ADM /FP 098
RALEIGH TOWNE, APT. #47 A * L/RT
525 WADE AVENUE
RALEIGH 27605 919 828-3480

NEWELL, LANNING RICHARD GE /IM 092
3320 EXECUTIVE DR., STE. 119 AC
RALEIGH 27609 919 878-9465

NEWELL, MCARTHUR OBG 041
721 GREEN VALLEY RD.,STE. 103 AC
PO BOX 21503
GREENSBORO 27408 919 274-1558

NEWELL, ROBERT B., JR. PTH /CLP 025
2000 NEUSE BLVD. AC
NEW BERN 28560 919 633-8058

NEWELL, ROBERT BARTHOLOMEW GS/EM 040
508 NEPTUNE DR. A L/RT
CAPE CARTERET
SWANSBORO 28584 919 393-6417

NEWHALL, PHILIP MAYES 034
2055-A W. ACADEMY ST. * S
WINSTON-SALEM 27103 919 727-8869

NEWLAND, CHARLES LOGAN FP 088
104 WOODSIDE DR. A L/RT
BREVARD 28712 704 883-2156

NEWMAN, CHRISTOPHER ERNEST 041
2322 DANBURY RD. C
GREENSBORO 27408 919 684-6968

NEWMAN, DAVID HAROLD GS 041
200 E. NORTHWOOD ST., STE.304 A AC
GREENSBORO 27401 919 378-9811
FAX 919 275-2055

NEWMAN, EDWIN R 060
CHARLOTTE RADIOLOGY A P AC
PO BOX 36937
CHARLOTTE 28236 704 364-0568

NEWMAN, GLENN EDWIN R /DR 032
BOX 3808, DUMC AC
DURHAM 27710 919 681-2711
FAX 919 681-5636

NEWMAN, HAROLD HASTINGS, JR. GP /OM 080
9 OAK RD. A L/RT
SALISBURY 28144 704 633-7070

NEWMAN, KEITH DAVID U 032
3118 COACHMANS WAY R
DURHAM 27705 919 493-3044

NEWMAN, LEON BRYANT GS 080
327 MOCKSVILLE AVE. A AC
SALISBURY 28144 704 637-2750
FAX 704 637-2752

NEWMAN, ROBERT HENRY DR 014
PO BOX 659 A AC
LENOIR 28645 704 754-2283

NEWMAN, WALTER JOSEPH NEP /IM 074
6 DOCTOR'S PARK A AC
GREENVILLE 27834 919 752-8880

NEWMAN, WILLIAM HAROLD GS /TS 026
1205 LONGLEAF DR. RT
FAYETTEVILLE 28305 919 485-6464

NEWMAN, WILLIAM NEAL CD /IM 092
WAKE HEART ASSOCIATES AC
PO BOX 14427
RALEIGH 27620 919 832-9253
FAX 919 231-9546

NEWSOM, GEORGIA L. IM 050
101 ASHEVILLE HIGHWAY AC
SYLVA 28779 704 586-2132

NEWSOME, ALBERT RAY IM /CD 034
1405 PLAZA DRIVE A AC
WINSTON-SALEM 27103 919 765-4131

NEWSOME, SAMUEL CARL FP 034
P. O. BOX 1129 A AC
KING 27021 919 983-4346

NEWTON, DALE ALAN IM /PD 033
101 CLINIC DRIVE A AC
TARBORO 27886 919 823-2105
FAX 919 982-3316

NEWTON, DOUGLAS FRISBIE GE /IM 074
1705 W. SIXTH STREET AC
GREENVILLE 27834 919 752-6101

NEWTON, GRAHAM DOUGALD D 060
1600 E. FIFTH STREET A AC
CHARLOTTE 28204 704 376-1523

NEWTON, JIMMIE ISAAC OBG 034
3030 TRENWEST DRIVE AC
WINSTON-SALEM 27103 919 768-4310

NEWTON, JOHN THOMAS FP 082
403 FAIRVIEW ST. A * AC
CLINTON 28328 919 592-6011

NEWTON, SANDRA JO FP 032
5009 BOULDER RUN RD. C
HILLSBOROUGH 27278 919 479-6300

NG, GODOFREDO TAN GS /TS 092
1101 DRESSER COURT AC
RALEIGH 27609 919 876-2010

NG, KHYE WENG N /IM 032
PO BOX 15249 A AC
3901 ROXBORO RD.
DURHAM 27704 919 479-4100

NG, VICTOR WANG TA FP 007
PO BOX 999 AC
ROBERSONVILLE 27871 919 795-3018

NGO, CORAZON IM 031
PO BOX 538 A AC
KENANSVILLE 28349 919 296-1811

NIAZI-SAI, ABDOLHAKIM IM /HEM 004
208 HALL STREET A AC
WADESBORO 28170 704 694-5159

NICASTRO, JOSEPH FRANCIS ORS 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-3947

NICHOLS, MARK LOVEL IM /EM 092
3801 COMPUTER DR. AC
RALEIGH 27609 919 787-0302

NICHOLS, ROBERT VANCE U 065
1905 GLEN MEADE RD. A AC
WILMINGTON 28401 919 763-6251

NICHOLSON, CHARLES H. AN 092
PO BOX 18139 A AC
RALEIGH 27619 919 781-7420

NICHOLSON, JAMES EVANS, III FP /GER 007
304 MCCASKEY ROAD A AC
WILLIAMSTON 27892 919 792-8193
FAX 919 752-1834

NICHOLSON, JOHN HARVEY, II IM 049
404 W. END AVE. L/RT
STATESVILLE 28677 704 873-8368

NICHOLSON, THOMAS WESTRAY CD /IM 007
615 E. 12TH STREET AC
WASHINGTON 27889 919 946-2101

NICKENS, LARRY COBB PD 096
2706 MEDICAL OFFICE PLACE AC
GOLDSBORO 27530 919 734-4736

NICKERSON, LLOYD EMERY FP 080
516 MOCKSVILLE AVE. AC
SALISBURY 28144 704 633-7070

NICKS, CARL MICHAEL ORS 018
250 18TH ST. CIRCLE, SE AC
UNIFOUR MEDICAL COMMONS
HICKORY 28602 704 652-8300

NICKS, DENNIS BART PS /HS 065
2305 CANTERWOOD AC
WILMINGTON 28401 919 343-0119

NICKS, SALLY AGNER RHU /RHU 018
912 SECOND ST. NE AC
HICKORY 28601 704 322-1996

NIELAND, ROBERT BRUCE FP 018
24 SECOND AVENUE, N. E. A AC
HICKORY 28601 704 328-2231

NIEMEYER, CHARLES JOHN ORS 036
902 COX ROAD, SUITE A A P AC
GASTONIA 28054 704 865-6487
FAX 704 865-6487

NIESS, GARY STEWART CD 060
1718 E. FOURTH ST., STE. 501 AC
CHARLOTTE 28204 704 347-2024
FAX 704 347-2011

NIFONG, FRANK MILLER FP 034
P. O. BOX 988 L/RT
CLEMMONS 27012 919 766-6811

NIFONG, TED JAMES FP 082
403 FAIRVIEW ST. A AC
CLINTON 28328 919 592-6011

NIFONG, TED JAMES FP 082
403 FAIRVIEW ST. A AC
CLINTON 28328 919 592-6011

NIGALYE, RAJENDRA LAXMIKANT IM 032
4600 UNIVERSITY DR., APT. 410 A R
DURHAM 27707 919 489-6159

NITKA, JAMES EDWARD ORS 041
315 W. WENDOVER AVE. AC
GREENSBORO 27408 919 275-0724

NIXON, JOHN RANDALL DR 060
PO BOX 221249 AC
CHARLOTTE 28222 704 371-4057

NIXON, WILLIAM PRESTON, JR. NEP /IM 065
1302 MEDICAL CENTER DRIVE A P AC
WILMINGTON 28401 919 763-3651

NOAH, HUGH BRYAN ORS /HS 040
624 QUAKER LANE, SUITE D-200 P AC
HIGH POINT 27262 919 841-6262

NOAH, TERRY LEE PD /PDP 032
1803 PATHWAY DR. R
CARRBORO 27510 919 966-1055

NOAH, VAN BATCHELOR OPH 092
3900 OLD WAKE FOREST RD. A AC
SUITE 104
RALEIGH 27609 919 872-3242

NOBLE, RICHARD CLAIBORNE IM 092
2620 NEW BERN AVE. AC
RALEIGH 27610 919 231-2800

NOECKER, ROBERT J. 032
110 MELVILLE LOOP APT. 17 A R
CHAPEL HILL 27514 919 933-6668

NOEL, RICHARD DAVID GS 039
1026 COLLEGE STREET AC
OXFORD 27565 919 693-7066

NOELL, JOHN STANFORD FP 060
PO BOX 16518 AC
CHARLOTTE 28297 704 584-0956

NOELL, WILLIAM J., JR. GS 050
201 ASHEVILLE HWY. STE. 203 A AC
SYLVA 28779 704 586-3976

NOLAN, CLYDE, JR. D 041
1317 N. ELM ST. STE. 9 AC
GREENSBORO 27401 919 379-1193

NOLAN, ROBERT EARL GS /VS 034
1901 S. HAWTHORNE, STE. 210 AC
WINSTON-SALEM 27103 919 765-5101

NOLEN, JACK RICHARD OBG 035
PO BOX 1566 AC
GADSDEN, AL 35902 205 442-3116

NOMEIR, ABDEL-MOHSEN CD /IM 034
3219 PENSBY ROAD A AC
WINSTON-SALEM 27106 919 748-4581

NONEMAN, JACK W., JR. CD /IM 092
3324 SIX FORKS RD. A P AC
RALEIGH 27609 919 781-7772
FAX 919 787-6331

NORCROSS, FREDERICK CLEVELAND PD 036
1839 E. GARRISON BOULEVARD AC
GASTONIA 28054 704 864-2685

NORDAN, JOHN MCLEAN U 013
102 LAKE CONCORD ROAD, N.E. A AC
CONCORD 28025 704 786-5131

NORFLEET, CHARLES MILLNER, JR. U 034
1244 ARBOR RD. #199 A L/RT
WINSTON-SALEM 27104 919 722-1464

NORINS, MICHAEL ELLIOTT IM 041
520 N. ELAM AVE. AC
GREENSBORO 27403 919 547-1700

NORMAN, DAVID ALAN PD 023
101 GROVER ST. A C
SHELBY 28150 704 482-1435

NORRIS, CHARLES BRADLEY IM 060
1039 AROSA AVE. A L/RT
CHARLOTTE 28203 704 334-1506

NORRIS, H. THOMAS PTH 074
DEPT. OF PATHOLOGY A AC
PITT COUNTY MEM. HOSPITAL
GREENVILLE 27858 919 551-4951
FAX 919 551-3320

NORTON DEBORAH RUTH FP 032
PO BOX 4 AC
PROSPECT HILL COMM HEALTH CTR.
PROSPECT HILL 27314 919 562-3311

NORTON, EVE GWENDOLYN EM 060
4000 KINGSCOTE CR. A AC
CHARLOTTE 28226 704 355-3181

NOTO, JOSEPH ANTHONY TS /GS 011
520 BILTMORE AVENUE AC
ASHEVILLE 28801 704 252-7357

NOVEMBER, MARTIN T. 032
17 SPRING GARDEN APTS. S
CHAPEL HILL 27514

NOVICK, THOMAS L. GS /VS 060
3535 RANDOLPH RD. STE. 201-W AC
CHARLOTTE 28211 704 364-8100

NOWLIN, GEORGE PRESTON U 060
1868 MARYLAND AVENUE A L/RT
CHARLOTTE 28209 704 334-0302

NSIEN, EPHRAIM EMMANUAL IM /GE 074
DEPT. OF MEDICINE A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4652

NUDELMAN, ROBERT W. NS 041
1613 COLONAIL AVE. A AC
GREENSBORO 27408 919 272-4578

NUGENT, RICHARD RECHER GPM /OBG 032
DIV.OF MATERNAL/CHILD HEALTH * AC
PO BOX 27687
RALEIGH 27611 919 733-7791

NUNEZ, GREGORY M. FP 010
341 WHITEVILLE RD. A C
SHALLOTTE 28459 919 754-8731

NUNLEY, JAMES ALBERT, II ORS /HS 032
BOX 2919, DUMC A AC
DURHAM 27710 919 684-4033

NUNLEY, MICHAEL GRAY OPH 098
2108 HERMITAGE RD. A AC
WILSON 27893 919 243-1411

NUNLEY, WALLACE CLAY, JR. OBG 060
PO BOX 32861 AC
CHARLOTTE 28232 704 355-3153

NUNN, CHALMERS MORTON, JR. GE 064
1413 JEREMY LANE AC
ROCKY MOUNT 27801 919 443-9084

NUNNALLY, JAMES THOMAS, III CHP /P 092
2000 YORKGATE DRIVE A AC
RALEIGH 27612 919 781-1160

NUSSEAR, DAVID WILLIAM 034
1617 QUEEN ST. A S
WINSTON-SALEM 27103 919 723-3930

NUTT, JAMES EDWARD CD /IM 092
3324 SIX FORKS RD. A P AC
RALEIGH 27609 919 781-7772

NUTT, SUZANNE HAMILTON N 000
1713 S. PRAIRIE CIR. A R
LEXINGTON, KY 40502 606 273-5471

NUZUM, CLAUDE T. IM /GE 032
UNC, CB 7185, WING C, BOX 2 AC
221-H MEDICAL SCHOOL
CHAPEL HILL 27599 919 966-2461

NYCUM, LAWRENCE ROSS 032
1928 NAUDAIN ST. S
PHILADELPHIA, PA 19146

NYE, SYLVANUS WILLIAM PTH /CLP 054
700 ROUNDTREE STREET A AC
KINSTON 28501 919 522-7141

NYLAND, LEONARD ROBERT 041
1200 N. ELM ST. R
GREENSBORO 27401 919 379-4132

O'BAR, PAUL RUPERT IM /ID 060
1350 S. KINGS DRIVE AC
CHARLOTTE 28207 704 372-8750

O'BRIEN, MARY ELIZABETH IM /GER 065
2131 S. 17TH ST. AC
WILMINGTON 28402 919 343-0161

O'BRIEN, MICHAEL K. 034
2418 LYNDHURST AVE. A S
WINSTON-SALEM 27103 919 723-1492

O'BRIEN, THOMAS FRANCIS, JR. IM /ADM 074
ECU SCHOOL OF MEDICINE A * AC
BRODY BLDG. AD37-A
GREENVILLE 27858 919 551-2149

O'CAIN, CHARLES FRANK PUD /CCM 011
30 CHOCTAW STREET A AC
ASHEVILLE 28801 704 255-7733
FAX 704 258-3084

O'CONNOR, MICHAEL LEE PTH 034
BOWMAN GRAY, DEPT. OF PATH. AC
WINSTON-SALEM 27103 919 748-4311

O'CONNOR, ROBERT DARRELL OTO 018
PO DRAWER 2484 AC
HICKORY 28602 704 322-3725

O'DELL, KEVIN BRUCE EM 060
10208 RATTERSLY CT. AC
CHARLOTTE 28226 704 355-3181

O'DONNELL, HELEN MARY FP /PM 000
5829 FONTANA DR. AC
FAIRWAY, KS 66205 913 722-4187

O'NEIL, H. WILLIAM OBG 067
200 MEMORIAL DR. A AC
JACKSONVILLE 28546 919 353-2115

O'NEILL, MICHAEL RAYMOND U 060
1718 E. 4TH ST., STE. 807 A AC
PRESBYTERIAN MEDICAL TOWER
CHARLOTTE 28204 704 334-3033
FAX 704 358-0418

O'QUINN, EDWARD NELSON OBG 065
115 S. CHANNEL DR. L/RT
WRIGHTSVILLE BEACH 28480 919 256-2766

OAK, CHANG YOON IM 007
HIGHWAY 64 EAST A AC
PO BOX 987
PLYMOUTH 27962 919 793-9051

OAKES, WALTER JERRY NS 032
BOX 3272, DUMC A AC
DURHAM 27710 919 684-5013

OAKLEY, STANLEY PRESTON, JR. P 074
DEPT. OF PSYCHIATRY A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2663

OAKLEY, WARD SAYRE, JR. ORS 063
P. O. BOX 1650 A AC
PINEHURST 28374 919 295-4200

OAKLEY, WM. ENNIS, JR. 074
304 SYCAMORE BRANCHES CLOSE S
WINTERVILLE 28590 919 355-4706

OATES, LARRY ALLEN IM 092
3100 DURALEIGH RD. AC
RALEIGH 27612 919 881-5300

OBER, KARL PATRICK END /IM 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-6027

OBER, SCOTT K.
DOCTORS PARK APTS. U-1 R
GREENVILLE 27834

OBERLIN, DELOY CHARLES AN /EM 018
ROUTE #3, BOX 690 AC
NEWTON 28658 704 322-6070

OBRECHT, WILLIAM F., JR. GE 032
PO BOX 1249 R
WHITEVILLE 28472 919 544-9535

ODDONE, EUGENE 032
4214 TROTTER RIDGE RD. R
DURHAM 27707 919 286-0411

ODERE, FRED GORDON PTH 032
DURHAM CO. HOSP-PTH P AC
DURHAM 27704 919 470-5243

ODOM, GUY LEARY NS 032
2812 CHELSEA CIRCLE A L/RT
DURHAM 27707 919 489-2206

ODOM, TERRY DAVID OPH 041
411-C PARKWAY DR. AC
GREENSBORO 27401 919 272-6355

OELRICH, AUGUST M. GS 053
1010 MONTAGUE CT. A L/RT
SANFORD 27330 919 775-7371

OESTREICH, LISA 034
300 S. HAWTHORNE RD. R
WINSTON-SALEM 27103 919 748-2011

OGBURN, LUNDIE CALVIN GYN 034
4740 FLANDERS BLVD. A L/RT
TALLAHASSEE, FL 32303

OGBURN, PAUL LANIER GS /TRS 049
230 PENICILLIN POINT ON L/RT
LAKE NORMAN
TROUTMAN 28166 704 878-2011

OGDEN, ROBERT HARVEY GYN 036
1032 X-RAY DR. A P AC
GASTONIA 28054 704 867-6348

OGDEN, WILLIAM SINGLETON ORS 024
600 N. MADISON ST. A P AC
WHITEVILLE 28472 919 642-0337

OHL, MATTHEW DAVID ORS 060
101 W. T. HARRIS BLVD.STE.220 A AC
CHARLOTTE 28262 704 547-1552

OJEDA, TOMAS IM 092
3100 DURALEIGH RD. AC
RALEIGH 27612 919 881-5300

OLACK, JEROME A. R 026
616 RAVENCROFT AC
FAYETTEVILLE 28314 919 822-7069
FAX 919 822-7093

OLATIDOYE, BABATLINDE A. 032
PO BOX 187 S
CHAPEL HILL 27514 919 933-6346

OLBRANTZ, KEITH R. R 011
445 BILTMORE CTR., STE. 301 A AC
ASHEVILLE 28801 704 254-2371

OLDER, ROBERT ALAN DR 032
3104 DEVON RD. A AC
DURHAM 27707 919 383-6984

OLDHAM, H. NEWLAND, JR. CDS /GS 032
DUKE UNIV. MED. CTR. A AC
DURHAM 27710 919 684-3243
FAX 919 684-8563

OLDS, WARREN WOODSON RO 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-4981

OLEEN, GEORGE GERHARD FP /ADM 090
2715 PAGELAND HIGHWAY A L
PO BOX 973
MONROE 28112 704 283-5562

OLESON, JAMES ROBERT TR /ON 032
BOX 3085, DUMC A AC
DURHAM 27710 919 684-3742
FAX 919 684-3953

OLIN, DAVID BAKER NEP /IM 041
111 W. WENDOVER AVE. P AC
GREENSBORO 27401 919 379-9708
FAX 919 379-8714

OLINGER, BENJAMIN RAY OTO /HNS 011
131 MCDOWELL STREET A AC
ASHEVILLE 28801 704 254-3517

OLIVER, ANDREW BLAINE, JR. OBG 060
101 W. T. HARRIS BLVD. #A323 AC
SUITE A-323
CHARLOTTE 28213 704 547-8359

OLIVER, DAVID CLARK CD /IM 025
702 NEWMAN RD. AC
MCCARTHY SQUARE
NEW BERN 28560 919 633-5333

OLIVER, FREDERICK CARLTON, JR. IM 092
103 BAINES COURT AC
CARY 27511 919 467-6125

OLIVER, GEORGE MOTLEY, JR. OBG 016
6 MEDICAL PARK AC
MOREHEAD CITY 28557 919 726-8016

OLIVER, JOHN GLADSON OPH 097
408 EIGHTH STREET A AC
NORTH WILKESBORO 28659 919 838-5121

OLIVER, JOSEPH ANDREW FP 080
P. O. BOX 458 A L
ROCKWELL 28138 704 279-7227

OLIVER, KENNETH LEON OBG 060
2801 RANDOLPH RD. AC
CHARLOTTE 28211 704 377-5675
FAX 704 335-8163

OLIVER, WILLIAM RUSSELL PTH 032
10-B POPLAR ST. R
CHAPEL HILL 27516 919 929-7120

OLIVERI, JANICE A. 032
211 CEDARWOOD LANE S
CARRBORO 27510

OLLER, DALE WILLIAM GS /VS 092
3000 NEW BERN AVE. AC
RALEIGH 27610 919 755-8698
FAX 919 250-8227

OLSEN, ELISE ARLINE D /IM 032
BOX 3294, DUMC AC
DURHAM 27710 919 684-6844
FAX 919 684-6505

OLSEN, KENNETH GEORGE AN 067
137 COKE PLACE AC
JACKSONVILLE 28540 919 455-0188

OLSON, BEVERLY IM /EM 029
PO BOX 306 AC
CLIMAX 27233 919 274-2648

OLSON, CRAIG B. R 067
860 MILL RIVER RD. AC
JACKSONVILLE 28540 919 353-5090

OLSON, PAUL RICHARD FP 011
ROUTE #3, BOX 112 AC
LEICESTER 28748 704 258-0635

OLSON, ROBERT MORTIMER OPH 051
RT. 1, BOX 371 A L/RT
KENLY 27542 919 284-2526

OLYMPIO, GEORGIA K. PTH 034
RT. #2, BOX 197 A AC
CONOVER 28613 919 768-5217

OLYMPIO, MICHAEL A. AN 034
397 HOLLINSWOOD AVE. AC
WINSTON-SALEM 27103 919 768-5217

OMAN, TIMOTHY ROY FP 092
3100 BLUE RIDGE RD., STE. 202 C
RALEIGH 27612 919 782-0146

OMER, SYED N /IM 012
BROUGHTON HOSPITAL A AC
MORGANTON 28655 704 433-2284

ONTJES, DAVID AINSWORTH END /IM 032
UNC SCHOOL OF MEDICINE AC
CHAPEL HILL 27599 919 966-3336

ORBOCK, JACOB ALEXANDER CD /IM 034
250 CHARLOIS BOULEVARD AC
WINSTON-SALEM 27103 919 768-4730

ORCUTT, JAMES MICHAEL IM 060
8004 SHOREWOOD DR. A R
CHARLOTTE 28277 704 355-2000

ORDONEZ, ESPERANZA MARIA EM 092
3700 EBENEZER CHURCH RD. C
RALEIGH 27612 919 937-6600

ORGAIN, EDWARD STEWART CD /IM 032
3321 DEVON ROAD A L/RT
DURHAM 27707 919 489-2111

ORLANDO, ROY CHARLES GE /IM 032
326 CLINICAL SCI.BLDG.CB 7080 AC
UNC DEPT. OF MEDICINE
CHAPEL HILL 27599 919 966-2511

ORLOWSKI, RICHARD ON /HEM 018
225 18TH ST. SE AC
P. O. BOX 3710
HICKORY 28603 704 324-9550

ORMAND, JOHN WILLIAM, JR. OBG 065
1809 GLEN MEADE ROAD A AC
WILMINGTON 28401 919 763-1505

ORMAND, THOMAN LANE OBG 090
1408 E. FRANKLIN ST. A AC
MONROE 28110 704 289-2553

ORNITZ, ROBERT DAVID ON /TR 092
4420 LAKE BOONE TRAIL A AC
RALEIGH 27607 919 783-3018

ORR, LYNN HUIE, JR. CD /IM 074
620 S. MEMORIAL DR. AC
GREENVILLE 27834 919 752-6101

ORR, SAMUEL LAWRENCE PTH 060
CAROLINAS MED. CTR. AC
P. O. BOX 32861
CHARLOTTE 28232 704 355-2251

ORRINGER, EUGENE PAUL IM /HEM 032
UNC, DIV. OF HEM, CB 7600 AC
3006 GENERAL CLI. RES.CENTER
CHAPEL HILL 27599 919 966-2467
FAX 919 966-1576

ORRIS, GARY STEVEN EM 034
7035-F BRANDEMERE LANE R
WINSTON-SALEM 27106 919 744-1675

ORRISON, WILLIAM GRESHAM OPH 012
335 E. PARKER ROAD AC
MORGANTON 28655 704 433-1000
FAX 704 433-6274

ORTEL, THOMAS LEE HEM /ON 032
BOX 3422, DUMC R
DURHAM 27710 919 684-8111

OSBAHR, ALBERT JAMES 044
105 GREEN DRIVE A R
WAYNESVILLE 28786 704 456-3511

OSBORNE, JAMES C. IM 041
1904 N. CHURCH ST. A AC
GREENSBORO 27405 919 274-3241

OSCHWALD, DONALD L.A., JR. PS 092
3320 EXECUTIVE DR. STE. 222 A AC
RALEIGH 27609 919 850-0238

OSEROFF, ALLEN CD /IM 074
1705 W. 6TH ST., BLDG. E AC
GREENVILLE 27834 919 752-6101
FAX 919 752-7781

OSTERHOUT, SHIRLEY K. PD 032
BOX 3007, DUMC P AC
DURHAM 27710 919 684-4438

OSTROW, BARRY SEYMOUR P 092
3900 BROWNING PL. STE. 201 A AC
RALEIGH 27609 919 787-7125

OSTROWSKI, EDWARD S. DR 001
831 WARWICK COURT AC
BURLINGTON 27215 919 229-1570

OTLEY, CLARK C. 032
223-A W. WOODRIDGE DR. A S
DURHAM 27707 919 490-0199

OTT, DAVID JAMES DR 034
4761 GREY FOX COURT A AC
WINSTON-SALEM 27104 919 765-7633

OTTENI, GERALD VINCENT DR 013
123 OVERBROOK DRIVE A AC
CONCORD 28025 704 786-2111

OVERBY, JOSEPH RANDAL, JR. FP 025
810 KENNEDY AVE. A AC
NEW BERN 28560 919 633-1678

OVERCASH, WILLIAM TODD 032
PO BOX 1343 A R
ALBEMARLE 28002 704 982-8650

OVERTON, CARROLL CHRISTOPHER 032
504 PITTSBORO ST. A S
CHAPEL HILL 27514 919 942-0338

OVERTON, DOLPHIN HENRY,JR. OBG 064
132 FOY DRIVE AC
ROCKY MOUNT 27801 919 443-6622

OWEIDA, SAMI JOSEPH ORS 060
1900 RANDOLPH RD. STE. 410 AC
CHARLOTTE 28207 704 339-0081

OWEN, CHARLES FLETCHER, JR. R 076
P. O. BOX 146 A L/RT
ASHEBORO 27203 919 625-5151

OWEN, WILLIAM BOYD GP 044
PO BOX 780 L
OWEN-SMITH CLINIC, PA
WAYNESVILLE 28786 704 456-8601

OWEN, WILLIAM BOYD, JR. ORS 044
106 GALLOWAY STREET AC
WAYNESVILLE 28786 704 452-2207

OWENS, BERNARD JAMES, III CDS /GS 041
1017 PROFESSIONAL VILLAGE A AC
GREENSBORO 27401 919 274-2933

OWENS, FRANCIS LEROY GP /ABS 063
PO BOX 3101 A L/RT
PINEHURST 28374

OWENS, FREDERICK THOMAS PUD /IM 018
PO BOX 3033 A * AC
HICKORY 28603 704 322-8265

OWENS, SUSAN LEIGH 074
APT. S-5 DOCTOR'S PARK A S
GREENVILLE 27834 919 830-5449

OWENS, WILLIAM LAWRENCE IM 082
WOODSIDE PROF. BLDG. A P AC
CLINTON 28328 919 592-4605

OWENS, ZACK DOXEY GS /GYN 070
P. O. BOX 422 A L/RT
ELIZABETH CITY 27909 919 335-4492

OWENSBY, CHARLTON NORMAN EM 060
4917 S. BOULEVARD AC
CHARLOTTE 28217 704 527-3700

OWSLEY, JAMES HAROLD R /NM 018
P. O. BOX 308 A AC
HICKORY 28603 704 322-2644

OXNER, CLAUDIA GERTRUDE AN 011
DOCTOR'S BLDG.,RM. #202 A P AC
ASHEVILLE 28801 704 254-1960

OZER, HOWARD ON /IG 032
UNC 3019 OLD CLINIC BLDG. 226H AC
CHAPEL HILL 27599 919 966-4431

PAAR, JOHN ARTHUR CD /IM 092
WAKE MEDICAL CENTER AC
3000 NEW BERN AVE.
RALEIGH 27610 919 250-8000

PACE, JOHN SANDERSON AN 065
825 INLET VIEW DRIVE P * AC
WILMINGTON 28409 919 350-0248

PACKER, JOHN WESLEY ORS /HS 092
3515 GLENWOOD AVE. A AC
PO BOX 10707
RALEIGH 27605 919 781-5600
FAX 919 782-6578

PADDISON, GEORGE MARION R 032
3920 REGENT ROAD A AC
DURHAM 27707 919 489-0272

PAGANO, JOSEPH STEPHEN IM /ID 032
UNC,LINEBERGER CANCER RES. AC
CHAPEL HILL 27599 919 966-3036

PAGE, ERNEST BENJAMIN,JR. IM /CD 092
2500 BLUE RIDGE RD., STE. 201 A AC
RALEIGH 27607 919 881-0054

PAGE, GEORGE DANTZLER GS 060
2128 QUEENS ROAD EAST A L/RT
CHARLOTTE 28207 704 377-9788

PAGTER, AMOS TOWNSEND, JR. IM 075
107 WILDERNESS ROAD AC
TRYON 28782 704 859-6697

PALMER, JEFFRESS GARY IM /HEM 032
UNC, DEPT. OF MEDICINE L
CB #7035
CHAPEL HILL 27599 919 966-3311

PALMER, ROBERT MARION FP 075
P. O. BOX 1159 AC
TRYON 28782 704 894-3306

PALMER, SCOTT MICHAEL, JR. 032
4617-E HOPE VALLEY RD. S
DURHAM 27707 919 493-4535

PALMERI, RUSSELL F. OBG 096
1201-C WAYNE MEM. DRIVE. A AC
GOLDSBORO 27534 919 735-3464

PANCOTTO, FRANK SALVATORE GE 013
920 N. CHURCH ST. AC
CONCORD 28025 704 788-4186

PANDARINATH, GUPTA IM /GE 042
PO DRAWER 158 A AC
ROANOKE RAPIDS 27870 919 537-0135

PANOSH, WANDA KOTVAN PD /IM 041
ANNA GOVE HEALTH CENTER AC
UNC AT GREENSBORO
GREENSBORO 27412 919 334-5340

PANTELAKOS, CONSTANTINE G. OTO 026
1653 OWEN DRIVE AC
FAYETTEVILLE 28304 919 484-5108

PAPE, GREGORY SCOTT IM /PUD 065
1515 DOCTORS CIRCLE AC
WILMINGTON 28401 919 763-5182

PAPINEAU, ALBAN FP 007
PO BOX 686 A L
PLYMOUTH 27962 919 793-4155

PAPPAS, PAMELA ANNE P 074
DEPT. OF PSYCHIATRIC MED. A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2404

PAPPAS, THEODORE NICK GS 032
BOX 3479, DUMC A AC
DURHAM 27710 919 681-3442

PARADA, MALCOLM PERRY OBG 080
315 MOCKSVILLE AVENUE AC
SALISBURY 28144 704 636-9270

PARFITT, HENRY E., JR. U 026
1786 METROMEDICAL DR. AC
FAYETTEVILLE 28303 919 485-8151

PARHAM, SUMNER MALONE GYN /OBS 091
973 MEADOW LANE A L/RT
HENDERSON 27536 919 438-3751

PARK, H. KIM PTH 074
DEPT PTH/LABORATORY MED. A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-5911

PARK, HYUNSOON EDIE 074
2002 RANDOM DR. A S
GREENSBORO 27407 919 292-2367

PARKE, JAMES CLIFTON, JR. PD /NPM 060
P. O. BOX 32861 A AC
CAROLINAS MED.CTR.
CHARLOTTE 28232 704 355-3156

PARKER, BILL JACK FP 018
105-A N. MAIN AVE. A AC
NEWTON 28658 704 465-2200

PARKER, CHARLES LAWRENCE OBG /GYN 025
801 MCCARTHY BLVD. A AC
NEW BERN 28560 919 633-3942

PARKER, GREGORY DEAN OBG 060
1350 S. KINGS DR. AC
CHARLOTTE 28207 704 342-8000

PARKER, HERMAN RICHARD, JR. IM 041
408-B PARKWAY DRIVE A AC
GREENSBORO 27401 919 275-9804

PARKER, JAMES LEE PTH 018
RT. #2, BOX 197 A AC
CONOVER 28613 704 322-3821

PARKER, JOHN CURTIS HEM /IM 032
N. C. MEMORIAL HOSPITAL AC
CHAPEL HILL 27599 919 966-2467

PARKER, JOSEPH B., JR. P /PYM 032
24 STONERIDGE CIR. L/RT
DURHAM 27705 919 684-2415

PARKER, MARK WILLIAM PDE /PDE 060
1900 RANDOLPH RD., STE 304 AC
CHARLOTTE 28207 704 372-8750

PARKER, MARY LOU FP 032
1820 ALYSSUM PL. A R
WINSTON-SALEM 27127 919 993-3189

PARKER, MICHAEL YOUNG OTO /HNS 092
3100 BLUE RIDGE RD., STE. 201 AC
RALEIGH 27612 919 787-1374
FAX 919 571-8139

PARKER, PAUL EDWIN AN 045
401 SIXTH AVE., WEST C
HENDERSONVILLE 28739 704 693-9669

PARKER, PETER EMENS GS /VS 034
2933 MAPLEWOOD AVENUE AC
WINSTON-SALEM 27103 919 765-0155
FAX 919 765-5494

PARKER, ROBERT L., JR. OBG 034
2927 LYNDHURST AVE. A AC
WINSTON-SALEM 27103 919 993-4532

PARKER, ROY TURNAGE OBG 032
BOX 3097, DUMC A L
DURHAM 27710 919 684-2626

PARKER, SAMUEL LESTER, JR. OBG 054
KINSTON CLINIC, NORTH L
KINSTON 28501 919 522-4333

PARKER, TALBOT FORT, JR. GYN 096
102 HANDLEY PARK CT. A * AC
GOLDSBORO 27534 919 734-3344

PARKER, WILLIAM PAXTON, JR. NS 065
1303 CYPRESS GROVE DR. A P * AC
WILMINGTON 28401 919 762-1804

PARKERSON, GEORGE ROBERT, JR. FP 032
BOX 2914, DUMC A P AC
DURHAM 27710 919 286-9896

PARKERSON, WALTER TUCK OPH 060
1718 E. FOURTH ST., STE. 207 AC
CHARLOTTE 28204 704 377-3689

PARKIN, CHARLES EVAN AN 049
RR 10, BOX 233-B AC
STATESVILLE 28677 704 873-5651
FAX 704 873-5651

PARKS, WILLIAM B., III 074
1916 SAM RITTENBERG BLVD. #104 S
CHARLESTON, SC 29407

PARKS, WILLIAM CRAIG IM 040
624 QUAKER LANE, SUITE 207-A A L

PARLIER, REGGIE DAVID FP /OBS 034
121 BUCKINGHAM RD. R
EASLEY, SC 29640

PARNELL, JEROME PATRICK,II U 092
3901 COMPUTER DR. AC
RALEIGH 27609 919 781-5104

PARR, ROBERT ALEXANDER EM 065
NEW HANOVER HOSPITAL AC
DEPT. OF EMERGENCY MED.
WILMINGTON 28401 919 343-7000

PARRIS, ALVA EDWARD FP /OM 034
2240 CLOVERDALE AVE., STE. 219 AC
WINSTON-SALEM 27103 919 725-5881

PARRISH, JOSEPH LESTER CD /CCM 063
205 PAGE ROAD AC
PINEHURST 28374 919 295-7882

PARROTT, FRANK STRONG GS 080
P. O. BOX 637 A L/RT
SALISBURY 28144 704 633-4627

PARROTT, OLSON, II OBG 053
1832 DOCTORS DR. P AC
SANFORD 27330 919 774-8761

PARROTT, WILLIAM THOMAS, JR. IM 054
905 N. QUEEN STREET L
KINSTON 28501 919 523-4269

PARSLEY, BETSY ALLEN PD 034
3420 THORESBY COURT AC
WINSTON-SALEM 27104 919 768-6830

PARSONS, JAMES SHERIDAN IM /GER 092
704 W. JONES STREET A AC
RALEIGH 27603 919 832-5125

PARSONS, LACY JACK OBS 078
2204 ROWLAND AVENUE A L/RT
LUMBERTON 28358 919 739-6431

PARSONS, MARSHAL RAY GS 060
2104 RANDOLPH RD. AC
CHARLOTTE 28207 704 377-3900

PARSONS, ROBERT GREGORY NR 060
CHARLOTTE RADIOLOGY A AC
PO BOX 36937
CHARLOTTE 28236 704 355-5401

PARTRICK, CORNELIUS THEODORE IM /CD 007
615 E. 12TH STREET RT
WASHINGTON 27889 919 946-2101

PASCAL, JOHN WILLIAM FP 060
4444 PARK ROAD AC
CHARLOTTE 28209 704 366-7586

PASCALE, JAMES A. PD /NPM 041
3710 HAZEL LN. A P AC
GREENSBORO 27408 919 854-6115

PASCHAL, BARTON RILEY ON /HEM 011
ONE DOCTORS DR. AC
ASHEVILLE 28801 704 254-8232

PASCHAL, GEORGE W., JR. GS 092
3334 ALAMANCE DRIVE A L/RT
RALEIGH 27609 919 787-2177

PASCHAL, GEORGE W.,III GS /CDS 092
2800 BLUE RIDGE BLVD.,STE. 503 AC
PO BOX 32090
RALEIGH 27622 919 781-0710

PASCHOLD, EUGENE H. ON /IM 034
3314 HEALY DR. STE. 107 AC
WINSTON-SALEM 27103 919 768-2521

PASPA, PHILIP ALEXANDER CD /IM 074
DEPT.MED/SECT. OF CARDIOLOGY AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858

PASQUARIELLO, JOHN P., JR. IM 065
1202 MEDICAL CENTER DR. A AC
WILMINGTON 28401 919 341-3300

PASQUINI, JOHN ALDO CD /IM 060
1718 E. 4TH ST., #501 AC
CHARLOTTE 28204 704 347-2024

PASSANNANTE, ANTHONY N. 032
DEPT. OF ANES. CB 7010 A R
NC MEMORIAL HOSP.
CHAPEL HILL 27599 919 966-5131

PASSERO, NICHOLAS JOHN 034
181 DALEWOOD DR., APT. #9 R
WINSTON-SALEM 27104 919 768-0477

PASTORINI, PAUL R. U 084
303 YADKIN ST. AC
ALBEMARLE 28001

PATE, BARRY REEVES OTO /HNS 011
285 MCDOWELL STREET AC
ASHEVILLE 28803 704 252-1853

PATE, CARL DANIEL, JR. FP 031
PO BOX 986 A AC
BEULAVILLE 28518 919 298-3125

PATE, DEWEY HARRIS PTH 092
WAKE MEDICAL CENTER A AC
RALEIGH 27610 919 755-8260

PATE, DORIS CATHERINE 074
MEDICAL OAKS APTS. #C-2 A S
GREENVILLE 27834 919 757-3513

PATE, EUGENE WESLEY, JR. ORS 054
KINSTON CLINIC,NORTH AC
KINSTON 28501 919 522-4155

PATE, MARION BUTLER, III GE /IM 053
555 CARTHAGE ST. AC
SANFORD 27330 919 774-4511

PATE, WILLIAM HENRY GP 096
P. O. BOX 129 AC
PIKEVILLE 27863 919 242-5271

PATEL, DIPA HARISH 032
136 BEECHWOOD DR. S
CARRBORO 27510 919 942-0899

PATEL, MAHENDRA S. IM /ON 042
PO DRAWER 158 A AC
ROANOKE RAPIDS 27870 919 537-0134

PATEL, NATU V. IM 036
635 COX RD., STE. E AC
GASTONIA 28054 704 864-9887

PATEL, URVASHI B. AN 083
311 MONTROSE LN. A AC
LAURINBURG 28352 919 276-9390

PATLAK, ERWIN M. P /EM 067
807 SHADOWRIDGE RD. * AC
JACKSONVILLE 28540 919 328-0589

PATOW, WARREN EDWARD OBG 026
1601-B OWEN DR. A AC
FAYETTEVILLE 28304 919 323-1152

PATRICK, SIMMONS ISLER R 054
2218 STALLINGS DR. L/RT
KINSTON 28501

PATRICK, WILLIAM WARD FP /PH 063
PO BOX 3290 * AC
PINEHURST 28374 919 295-1781

PATRONE, NICHOLAS ANGELO RHU /IM 064
ECU DEPT. OF MED.& PED. AC
GREENVILLE 27858 919 551-2533

PATSEAVOURAS, LOUIE LEE FPS 041
522 N. ELAM AVENUE AC
GREENSBORO 27403 919 299-4907

PATSELAS, TIMOTHY N. 074
206 KIRKLAND DR. R
GREENVILLE 27858 919 551-4100

PATSEY, TAMARA FISHER 032
203-20 HAMPTON LEE COURT A S
CARY 27513 919 467-8785

PATTERSON, CARL NORRIS HNS /FPS 032
1110 W. MAIN STREET * L
DURHAM 27701 919 682-9341

PATTERSON, DAVID READ GE /IM 041
520 N. ELAM AVE. A AC
GREENSBORO 27403 919 547-1700

PATTERSON, F. M. SIMMONS GS 025
4503 MORGAN LANE A L/RT
NEW BERN 28560 919 633-3492

PATTERSON, F. M. SIMMONS, JR. CD /IM 063
PINEHURST MEDICAL CLI. * AC
205 PAGE ROAD
PINEHURST 28374 919 295-5511

PATTERSON, HUBERT CLIFTON GS 032
602 S. COLUMBIA STREET A L/RT
CHAPEL HILL 27514 919 968-3051

PATTERSON, HUBERT CLIFTON OTO /PSF 092
P. O. BOX 18946 A *
RALEIGH 27619 919 787-7171
FAX 919 787-6427

PATTERSON, JAMES BENSON D 001
1638 MEMORIAL DR. A * AC
BURLINGTON 27215 919 226-8000

PATTERSON, JAN LOUISE 032
PO BOX 513 R
N. C. MEMORIAL HOSP.
CHAPEL HILL 27599 919 966-2491

PATTERSON, PATRICIA ENLOE 034
1632 W. FIRST ST., APT. #1 A S
WINSTON-SALEM 27103 919 721-0903

PATTERSON, RICHARD BRUCE PHO /PD 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-4085

PATTERSON, ROBERT WILLIAM FP /OM 053
110 FIELDS DR. A P AC
PO BOX 1850
SANFORD 27331 919 774-6320

PATTERSON, THOMAS HENRY, JR. FP 074
701 N. MAIN STREET AC
FARMVILLE 27828 919 753-3193

PATTERSON, THOMAS R. FP 034
P.O. BOX 968 AC
CLEMMONS 27012 919 766-0547

PATTON, DENZIL D. FP 074
DEPT. OF FAMILY MEDICINE A AC
ECU FAMILY PRACTICE CTR.
GREENVILLE 27858 919 551-4616

PAUCA, ALFREDO LAZO AN 034
300 S. HAWTHORNE RD. A AC
DEPT. OF ANESHTESIA
WINSTON-SALEM 27103 919 748-4473

PAUL, FRANKLIN ARTHUR GS /VS 026
6834 TOWBRIDGE ROAD AC
FAYETTEVILLE 28306 919 424-1501

PAUL, JOSEPH W., JR. 074
309 E. THIRD ST. A S
AYDEN 28513 919 746-4773

PAUL, VINCENT EDGAR ORS 041
809 GREEN VALLEY RD. A AC
GREENSBORO 27408 919 275-3325
FAX 919 275-5346

PAULI, JON WARREN IM 036
1896 REMOUNT RD. A AC
GASTONIA 28054 704 867-0735

PAULSON, DAVID FREEMAN U 032
BOX 2977, DUMC A AC
DURHAM 27710 919 684-5057
FAX 919 684-4611

PAYNE, FRED WILLIAM, JR. GS 064
100 NASH MEDICAL ARTS MALL AC
ROCKY MOUNT 27801 919 443-9084

PAYNE, JOSEPH MINTER GS /CRS 065
1501 MEDICAL CENTER DR. AC
WILMINGTON 28401 919 763-6289

PAYNE, ROBERT BENJAMIN IM /CD 060
3535 RANDOLPH ROAD A AC
CHARLOTTE 28211 704 365-0760
FAX 704 364-1641

PAYNE, THOMAS ARTHUR 060
430 QUEENS RD., APT. 621 R
CHARLOTTE 28207 701 333-0031

PAYNE, WINSTON CHARLES OPH 011
20/20 PLAZA,90 ASHLAND AVE. A AC
ASHEVILLE 28801 704 253-4735

PAYTON, JAMES BAYARD P /CHP 011
PO BOX 1101 A AC
ASHEVILLE 28802 704 254-3201
FAX 704 258-8095

PEACH, CHARLES ARTHUR OBG 036
1225 E. GARRISON BLVD. A AC
GASTONIA 28054 704 867-6386
FAX 704 867-7332

PEACOCK, BRENDA S. OBG 007
614 EAST 12TH ST. A AC
WASHINGTON 27889 919 946-6545

PEACOCK, ERLE EWART, JR. PS /GS 032
109 CONNER DR., STE. 2204 RT
CHAPEL HILL 27514 919 933-0005

PEACOCK, JAMES EDWARD, JR. ID /IM 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-4507

PEAK, LATHAM CONRAD FP 082
ROSEBORO MEDICAL CLINIC AC
ROSEBORO 28382 919 525-5055

PEARCE, KEVIN ANDREW FP 034
300 S. HAWTHORNE RD. A C
DEPT. OF FAMILY MEDICINE
WINSTON-SALEM 27103 919 748-2576

PEARCE, LARRY ALLEN N 034
650 LICHFIELD RD. A AC
WINSTON-SALEM 27104 919 748-4101

PEARCE, PHILIP HENDERSON OBG 032
209 E. CARVER ST. A P * AC
DURHAM 27704 919 471-2273

PEARL, ELLIOTT RICHARD AI /PD 032
708 GREENWOOD RD. AC
CHAPEL HILL 27514 919 490-8745

PEARLMAN, WM. GLENN 074
RT. #1, BOX 54-A S
GREENVILLE 27834

PEARSALL, DAVID W. GS 074
2315 EXECUTIVE PARK CIR. A AC
GREENVILLE 27834 919 830-5392

PEARSE, RICHARD LEHMER OBG /HYP 032
154 MONTROSE DR. A L/RT
DURHAM 27707 919 489-4248

PEARSON, JOHN KENT FP 092
P. O. BOX 727 L/RT
APEX 27502 919 362-8312

PEARSON, LAWRENCE HAMILTON D 023
700 N. LAFAYETTE ST. A AC
SHELBY 28150 704 484-0464

PEDEN, JAMES GWYN, JR. IM /P 074
DEPT. OF MEDICINE A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4633

PEDIADITAKIS, NICHOLAS P. P 092
5100 LEADMINE ROAD A AC
RALEIGH 27612 919 787-0710

PEDRAZA, HECTOR MANUEL ORS 096
2701 MEDICAL OFFICE PL. AC
GOLDSBORO 27530 919 736-2157

PEELER, FORREST EDWARDS FP 018
ROUTE #3, BOX 436 AC
MAIDEN 28650 704 428-2446

PEETE, CHARLES HENRY 034
206 LAWNDALE DR. S
WINSTON-SALEM 27104 919 765-6684

PEETE, CHARLES HENRY, JR. OBG 032
BOX 3192, DUMC A AC
DURHAM 27710 919 684-2346

PEETE, WILLIAM P.J. GS 032
BOX 3506, DUMC A AC
DURHAM 27710 919 684-3727

PEGRAM, PAUL SAMUEL, JR ID /IM 034
2332 ELIZABETH AVENUE A AC
WINSTON-SALEM 27103 919 748-4246

PEKMAN, WILLIAM MARTIN HS /ORS 018
250 18TH ST. CIRCLE, SE AC
HICKORY 28602 704 322-5172

PELLIGRA, SALVATORE JOHN PM 041
1200 N. ELM ST. A AC
GREENSBORO 27401 919 379-3667

PENCE, CARLA RAFFETY IM 049
1714 DAVIE AVE. A AC
STATESVILLE 28677

PENCE, JAMES JEROME, JR. FP 065
2110 SOUTH 17TH ST. AC
WILMINGTON 28401 919 763-3481

PENCE, JILL CERMAK IM 034
3310 BROOKVIEW HILLS BLVD. A AC
SUITE 201
WINSTON-SALEM 27103 919 765-0448

PENDER, JOHN ROBERT, III GS 060
1851 E. THIRD STREET, STE. 105 AC
CHARLOTTE 28204 704 332-4169

PENDSE, PRABHAKAR D. PDS /GS 041
1018 PROFESSIONAL VILLAGE A AC
GREENSBORO 27401 919 272-6161

PENKAR, SURESH JAGANNATH AN 034
3333 SILAS CREEK PARKWAY AC
WINSTON-SALEM 27103 919 760-5180

PENNELL, TIMOTHY CLINARD GS /TS 034
300 S. HAWTHORNE RD. A AC
DEPT. OF SURGERY
WINSTON-SALEM 27103 919 748-4671
FAX 919 748-4204

PENNINGTON, ROBERT CLAY, JR. IM /PD 032
400 CRUTCHFIELD ST., STE. A A C
DURHAM ADULT/CHILDHOOD MED. PA
DURHAM 27704 919 684-8111

PENNINK, MENNO NS 026
3314 MELROSE RD. STE. 103 A P AC
FAYETTEVILLE 28304 919 323-0475

PENNY, MICHAEL G. 034
270 MEADOWLARK RD. A S
WINSTON-SALEM 27106 919 945-4175

PEPPER, FRANCIS DEWITT, JR. DR 034
3155 MAPLEWOOD AVENUE RT
WINSTON-SALEM 27103 919 765-2702

PERDUE, JASPER BURT, JR. GS 035
111 JOLLY STREET AC
LOUISBURG 27549 919 496-4177

PEREZ-NAVARRO, PAUL A. 074
RT. #8, BOX 330-A A S
GREENVILLE 27834 919 757-0532

PEREZ-REYES, MARIO P 032
107 HUNTER HILL PLACE A AC
CHAPEL HILL 27514 919 933-9829

PEREZ-SELDEN, ALICE R. GS 051
601-A BERKSHIRE RD. AC
SMITHFIELD 27577 919 934-0281

PERKINS, PHILLIP KERRY EM 074
6811 OLD CANTON RD. #2003 R
RIDGELAND, MS 19157 601 977-9725

PERKINS, RICHARD BRIAN 000
PO BOX 32861 R
CAROLINAS MED. CTR.—IM
CHARLOTTE 28232 704 338-3165

PERKINS, ROBERT SANBORN TS /GS 036
3406 COUNTRY CLUB DR. AC
GASTONIA 28056 704 864-8377

PERLIK, PAUL C. ORS /HS 060
120 PROVIDENCE RD. A AC
CHARLOTTE 28207 704 377-0351

PERLMUTT, LOUIS MORRIS R /DR 092
3821 MERTON DR. A C
RALEIGH 27609 919 787-8199

PERONA, BARBARA PIEZ 032
294 TAPPAN ST. S
BROOKLINE, MA 02146

PERRAUT, THOMAS CHRISTOPHER OPH 075
212 HOSPITAL DRIVE AC
COLUMBUS 28722 704 894-3037

PERRIN, THOMAS SAMUEL, JR. IM 060
3535 RANDOLPH ROAD A L
CHARLOTTE 28211 704 365-0760

PERRY, CAREY JONES FP 035
113 JOLLY STREET A AC
LOUISBURG 27549 919 496-4250

PERRY, DAVID RUSSELL, JR. PD 034
3175 MAPLEWOOD AVENUE A AC
WINSTON-SALEM 27103 919 768-7030

PERRY, DWIGHT DEAN OPH 032
PO BOX 15249 A * AC
3901 ROXBORO RD.
DURHAM 27704 919 682-7175

PERRY, EVERETT LAVERN 034
2502 BOONE AVENUE A S
WINSTON-SALEM 27103 919 750-0919

PERRY, GLENN BRADFORD ORS /TRS 060
1001 BLYTHE BLVD. #200 A AC
CHARLOTTE 28203 704 373-0544

PERRY, HENRY BAKER, JR. OBG 041
17 NORTHLINE PL. A L/RT
GREENSBORO 27410 919 294-2026

PERRY, IRVIN SAMUEL PUD /IM 034
3001 LYNDHURST AVE. A AC
WINSTON-SALEM 27103 919 765-0383
FAX 919 768-1737

PERRY, WM. BRIAN 032
7015 HOLLY DALE DR. S
SAN ANTONIO, TX 78250

PERSONS, DEREK ALAN 032
1600 ANDERSON ST. #D-1 S
DURHAM 27707 919 489-1586

PESANO, RICK LOUIS 034
1407-A SENECA ST. A S
WINSTON-SALEM 27103 919 748-0946

PESTANA, ANAMARI D 063
5010 COCO PLUM WA AC
SARASOTA, FL 34241

PETERS, BRYAN MACLIN DR 092
3821 MERTON DR. A AC
RALEIGH 27609 919 250-8511

PETERS, DONALD W. P 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-3693

PETERS, PETER DEMJANTSCHUK GP /EM 012
1115 KATHERINE ST. A AC
VALDESE 28690 704 874-0519

PETERS, RANDY ALAN GE /IM 034
1830 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 765-0463

PETERS, ROBERT BROOKES, IV FP 033
101 CLINIC DRIVE A AC
TARBORO 27886 919 823-2105

PETERS, SARAH P 018
RT. #4, BOX 215 AC
CONOVER 28613

PETERS, STANLEY ORS 018
250 18TH ST. CIR. SE AC
HICKORY 28602 704 322-5172

PETERS, TERRENCE EDWARD GS /VS 077
110 MEDICAL CIRCLE A P AC
ROCKINGHAM 28379 919 895-0875

PETERS, WILLIAM ANTHONY,JR. GYN 070
P. O. BOX 392 A L
ELIZABETH CITY 27909 919 335-2355

PETERSEN, KENNETH MICHAEL GS /CDS 029
4 MEDICAL PARK DR. A AC
LEXINGTON 27292 704 246-2487

PETERSEN, KRISTI IM 092
7821 HIGHLANDVIEW AC
RALEIGH 27612 919 782-8260

PETERSON, ERIC WEBSTER P 011
5 CROWNINGWAY DR. A AC
ASHEVILLE 28804 704 254-3201
FAX 704 258-8095

PETERSON, HUGH DUANE PS /GS 032
UNC, BURNETT-WOMACK BLDG. AC
CHAPEL HILL 27599 919 966-3693
FAX 919 966-6923

PETERSON, LLOYD JOHN U 041
200 E. NORTHWOOD ST., STE. 520 A AC
GREENSBORO 27401 919 275-6115

PETERSON, NEIL PAUL R /NM 011
P. O. BOX 2959 AC
ASHEVILLE 28802 704 254-4617

PETERSON, ROBERT L.,JR. OBG 044
26 HOSPITAL DR. A AC
CLYDE 28721 919 332-8109

PETOK, TINA OBG 060
101 W.T.HARRIS BLVD. STE. 4106 A AC
UNIVERSITY MEDICAL PARK
CHARLOTTE 28262 704 548-6800
FAX 704 548-6806

PETRILLI, ROBERT EM 034
300 S. HAWTHORNE RD. A AC
DEPT. OF EMERGENCY MEDICINE
WINSTON-SALEM 27103 919 748-4625
FAX 919 748-5438

PETROU, HOMER DONALD GS 091
1912 RUIN CREEK RD., STE. 108 A P AC
HENDERSON 27536 919 438-5755

PETROZZA, JOSEPH ANTHONY GE /IM 049
110-H STOCKTON ST. A AC
STATESVILLE 28677 704 873-7330

PETROZZA, PATRICIA HARPER AN 034
300 S. HAWTHORNE RD. A P AC
WINSTON-SALEM 27103 919 748-4498

PETTY, JERRY MILLER NS 060
1010 EDGEHILL ROAD, N. A P AC
CHARLOTTE 28207 704 376-1606
FAX 704 335-8448

PFEIFFER, FREDERICK EARLY N /IM 060
MECKLENBURG NEUROLOGICAL ASSOC A AC
1900 RANDOLPH RD., STE. 1010
CHARLOTTE 28207 704 334-7311

PFUNDSTEIN, JOANN 032
3611 UNIVERSITY DR., APT. 22Z R
DURHAM 27707 919 489-9183

PHAN, THAI TIEN P /PYM 034
1321 ASHLEYBROOK LN. A P AC
WINSTON-SALEM 27103 919 659-9045

PHILLAPPART, CHRISTOPHER A. 034
500-H PARKRIDGE COURT A S
WINSTON-SALEM 27104 919 659-8915

PHILLIPS, BRUCE ALTON, JR. IM /GE 009
P. O. BOX 86 AC
ELIZABETHTOWN 28337 919 862-3212

PHILLIPS, CHARLES A. SPEAS GS /CRS 063
PO BOX 430 A * L/RT
PINEHURST 28374 919 692-8496

PHILLIPS, CHARLES WOODROW, JR. FP 001
108 E. MINNEOLA STREET AC
GIBSONVILLE 27249 919 449-4132

PHILLIPS, DEWITT DEWEY, JR. GP 060
1943 QUEENS RD., WEST L/RT
CHARLOTTE 28207 704 375-1221

PHILLIPS, HARRY RISSLER, III CD /IM 032
BOX 3126, DUMC A AC
DURHAM 27710 919 681-5816

PHILLIPS, HERBERT ORLANDAH, IV ORS 050
131 ASHEVILLE HWY. A AC
3 EASTGATE CT.
SYLVA 28779 704 586-5531

PHILLIPS, MARVIN WORTH FP 029
P. O. BOX 367 A AC
THOMASVILLE 27360 919 472-7262

PHILLIPS, MICHAEL J. OTO 029
10 MEDICAL PARK DR., STE. E A AC
LEXINGTON 27292 704 249-3551

PHILLIPS, WESLEY FLETCHER FP 034
P. O. BOX 727 A AC
KERNERSVILLE 27284 919 993-8181

PHIPPS, CARL SPENCER END /IM 034
3333 SILAS CREEK PARKWAY A P * AC
WINSTON-SALEM 27103 919 760-5960

HIPPS, ERVIN LAMAR 074
2013 SECOND LOOP RD. #A-5 S
FLORENCE, SC 29501

ICKARD, CARL GLENN, JR. IM 032
N. C. MEMORIAL HOSPITAL * AC
CHAPEL HILL 27599 919 966-4205

ICKARD, HENRY MACK IM 065
P. O. BOX 3351 A L/RT
WILMINGTON 28401 919 791-1417

ICKLESIMER, FRED L., JR. 034
1930 ELIZABETH AVE. APT. 3 S
WINSTON-SALEM 27103 919 723-7547

ICKLESIMER, FRED LEON OTO 040
624 QUAKER LN. STE. 301-D AC
HIGH POINT 27262 919 883-1366

ICKREL, JERRY CLINE PTH 070
P. O. DRAWER 403 A AC
ELIZABETH CITY 27909 919 335-2258

IECH, KENNETH STOWELL PTH 024
1211 PINKNEY ST. A AC
WHITEVILLE 28472 919 642-8011

IECYK, JOHN B. 032
B-4 HOWELL TERRACE APTS. A S
201 HOWELL ST.
CHAPEL HILL 27514 919 967-6495

IERCE, CHARLES GRAINGER PD /PDA 008
201 S. COLONY AVENUE AC
AHOSKIE 27910 919 332-5041

IERCE, HUBERT GAINES IM /CD 054
313 AIRPORT ROAD AC
KINSTON 28501 919 522-3072
FAX 919 522-2969

IERCE, ROBERT JAMES, JR. U 018
1202 N. CENTER STREET AC
HICKORY 28601 704 322-4340
FAX 704 323-8450

IERSON, GEORGE HERMAN, JR R /DR 041
P. O. BOX 13005 A AC
GREENSBORO 27415 919 379-4140

IERSON, WILLARD CRESSE, JR. GE /IM 092
3320 WAKE FOREST RD. AC
RALEIGH 27609 919 872-4850

IGFORD, ROBERT TOMS IM /CD 065
301 COLONIAL DRIVE A L/RT
WILMINGTON 28403 919 762-5020

IGGOTT, BERT CODY, JR. R 042
107 STILL FOREST PL. C
ROANOKE RAPIDS 27870 919 535-2121

IKE, MICHAEL ROBERT GE /IM 092
101 S. W. CARY PARKWAY * AC
CARY 27511 919 469-1858

IKULA, LOUIS, JR. NS 034
2825 LYNDHURST AVE. AC
WINSTON-SALEM 27103 919 765-3750

ILLAI, JEY P 036
238-3 WILMOT DR. #239 AC
GASTONIA 28054 704 867-2338

ILLSBURY, HAROLD C.,III OTO /HNS 032
UNC, CB #7070 * AC
BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-3341
FAX 919 966-7656

IPPIN, RICHARD LEE IM 074
201 N. MAIN ST. A AC
FARMVILLE 27828 919 753-7141

IPPITT, CHARLES H., JR. GYN /ON 034
1901 S.HAWTHORNE RD.,STE.,360 A AC
WINSTON-SALEM 27103 919 765-1464

ISHKO, MICHAEL THEODORE OBG 063
P. O. BOX 339 A L/RT
PINEHURST 28374 919 295-6634

ITSER, WILLIAM ROSS OTO 034
1420 PLAZA DRIVE AC
WINSTON SALEM N C 27103 919 765-4922
FAX 919 768-3072

ITSON, LYNN CHRISTINE 0BG 034
250 CHARLOIS BLVD. A AC
WINSTON-SALEM 27103 919 768-4730

ITTARD, JESSE C. FP 051
706 WILKINS ST. AC
SMITHFIELD 27577 919 934-5149

ITTAWAY, DONALD EDWARD OBG /REN 034
578 MAIDSTONE LANE AC
CLEMMONS 27012 919 748-2368

ITTMAN, ALFRED ROWLAND, JR. IM 078
2803 KENAN AVE. L/RT
LUMBERTON 28358 919 739-3362

PITTMAN, ERIC WILLIAMS PTH 049
IREDELL MEM. HOSP. BOX 1460 AC
STATESVILLE 28677 704 873-5661

PITTMAN, JERRY M. GP /EM 092
8312 CREEDMOOR RD. AC
RALEIGH 27613 919 846-7403

PITTMAN, WILLIAM BRYAN GE /IM 064
100 NASH MEDICAL ARTS MALL AC
ROCKY MOUNT 27804 919 443-9084

PITTS, WILLIAM REID NS /GS 060
429 EASTOVER ROAD A L/RT
CHARLOTTE 28207 704 333-0407

PIVER, JAMES DECAMP GS /ABS 067
1002 SCHALL PLACE A L/RT
JACKSONVILLE 28540 919 455-3780

PIXLEY, ROLAND L. OBG 060
150 PROVIDENCE RD. A AC
CHARLOTTE 28207 704 377-0461

PIXLEY, ROLAND THEO OBG 060
1023 EDGEHILL ROAD, SOUTH A AC
CHARLOTTE 28207 704 373-1541

PLANTES, PETER JAMES IM 034
250 CHARLOIS BLVD. A * AC
WINSTON-SALEM 27103 919 768-4730

PLONK, GEORGE WEBB GS 023
902 CRESCENT CIRCLE A L/RT
KINGS MOUNTAIN 28086 704 739-2272

PLONK, GEORGE WEBB, JR. GS /VS 034
BOWMAN GRAY - SURGERY AC
WINSTON-SALEM 27103 919 748-4449
FAX 919 748-5414

PLONK, JOHN BUTLER PD /ADL 060
427 N. WENDOVER RD. AC
CHARLOTTE 28211 704 364-3740

PLOTKIN, CHARLES NEAL AN 074
1705 W. 6TH ST. C
GREENVILLE 27834 919 752-2140

PLOWDEN, JAMES FRANCIS ON /HEM 040
P. O. BOX 5904 A AC
HIGH POINT 27262 919 841-2114

PLUMMER, CHARLES WAYNE AN 029
50 E. MAIN ST., STE. 111 A AC
THOMASVILLE 27360 919 472-2000

PLUNKETT, STEVEN ROCKWELL TR 060
PO BOX 33549 A AC
CHARLOTTE 28233 704 371-4189

PLYLER, EDWARD THURMAN FP 012
103 MEDICAL HEIGHTS DR. AC
MORGANTON 28655 704 437-4211

POCOCK, DONALD ANDREW IM /ID 025
5003 TRENT WOODS DRIVE A AC
NEW BERN 28560 919 633-1010

PODGER, KENNETH ARTHER GYN 032
7701 BEACH DRIVE A L/RT
MYRTLE BEACH, SC 29577 803 449-3459

PODGORNY, GEORGE EM /GS 034
2115 GEORGIA AVENUE A AC
WINSTON-SALEM 27104 919 727-1161
FAX 919 773-1986

POE, ROBERT WAYNE OTO 076
1808 PORTAGE PARKWAY A AC
ASHEBORO 27203 919 626-3616

POEHLING, GARY GEORGE ORS /HS 034
BOWMAN GRAY, DEPT. OF ORS A AC
WINSTON-SALEM 27103 919 748-3948
FAX 919 748-6286

POINT, STUART WATKINS R /NR 065
2212 DELANEY AVE. C
WILMINGTON 28403 919 762-3882

POINTS, GERALD LEE, II IM /FP 065
5305 WRIGHTSVILLE AVE. BLDG.B AC
WILMINGTON 28403 919 791-3506

POLE, DONALD TALIAFERRO OBG 065
5305-J WRIGHTSVILLE AVE. AC
WILMINGTON 28403 919 799-2168

POLLAK, MICHAEL JOSEPH OBG 034
302 FORSYTH MEDICAL PARK AC
WINSTON-SALEM 27103

POLLARD, HAROLD CALLOWAY,III OBG 034
2927 LYNDHURST AVE. A AC
WINSTON-SALEM 27103 919 765-9350
FAX 919 760-4255

POLLARD, JOHN ALAN AN 060
PO BOX 32861 P AC
CHARLOTTE 28232 704 355-2000

POLLARD, JOHN CHRISTOPHER PD 026
1213 WALTER REED DRIVE AC
FAYETTEVILLE 28304 919 484-6121

POLLARD, RICHARD J. 032
41 GOOSENECK RD. A S
CHAPEL HILL 27514 919 942-9470

POLLEY, DENNIS CHARLES D 098
1901 S. TARBORO ST. AC
WILSON 27893 919 291-5600
FAX 919 291-6935

POLLOCK, DAVID CARL 034
2053 ELIZABETH AVE. A S
WINSTON-SALEM 27103 919 724-9453

POLLOCK, F. EDWARD, JR. ORS 034
2077 QUEEN ST. R
WINSTON-SALEM 27103 919 748-3949

POLLOCK, FRANK EDWARD ORS 034
300 S. HAWTHORNE RD. A AC
BOWMAN GRAY SCH. OF MED.
WINSTON-SALEM 27103 919 768-1270

POLLOCK, HOKE DICKINSON OTO 065
1625 DOCTOR'S CIRCLE A AC
WILMINGTON 28401 919 762-0234

POLLOCK, JOSEPH J. PUD /IM 018
PO BOX 3033 AC
HICKORY 28603 704 322-8265

POLLOCK, MORRIS ARTHUR GE /IM 092
3320 WAKE FOREST RD. AC
RALEIGH 27609 919 872-4850

POLLOCK, NELSON EARL IM 040
P. O. BOX 5904 A AC
HIGH POINT 27262 919 841-2114

PONDER, MADELEINE 074
#R-3 DOCTORS PARK APTS. A S
BEASLEY DR.
GREENVILLE 27834 919 830-3706

PONDER, PHILIP WADE 032
104 BRIARWOOD CT. S
CLEMMONS 27012 919 929-6182

PONZI, JOSEPH WILLIAM PD 096
2706 MEDICAL OFFICE PLACE AC
GOLDSBORO 27530 919 734-4736

POOL, ROBERT SMITHWICK PTH /CLP 034
FORSYTH MEMORIAL HOSPITAL A AC
WINSTON-SALEM 27103 919 760-5840

POOLE, ERNEST TILGHMAN OPH /P 065
2310 DELANEY AVENUE A AC
WILMINGTON 28403 919 763-3664

POOLE, JAMES MORRISON PD /ADL 092
3803-A COMPUTER DR. AC
RALEIGH 27609 919 782-5273

POOLE, TERRY WAYNE OBG 092
2500 BLUE RIDGE CTR., STE. 401 A P AC
RALEIGH 27607 919 783-9565

POPE, CHARLES V. R 092
9602 LESLIE DR. AC
CHAPEL HILL 27516 919 787-8221

POPE, ROBERT CLYDE PD 098
200 RICHARDS STREET A AC
WILSON 27893 919 291-7001

POPE, SAMUEL A. IM 031
A L/RT
BEULAVILLE 28518 919 298-3193

POPE, THOMAS DAVID OBG 012
403 S. KING STREET A * AC
MORGANTON 28655 704 433-4661

POPE, THOMAS LEE, JR. R 034
300 S. HAWTHORNE RD. A AC
DEPT. OF RADIOLOGY
WINSTON-SALEM 27103 919 748-4316
FAX 919 748-2029

POPIO, KENNETH ANGELO IM /CD 026
1314 MEDICAL DR. #102 A AC
FAYETTEVILLE 28304 919 323-6151

PORCHEY, CARL JOSEPH, JR. IM 086
PO BOX 68 A AC
YADKINVILLE 27055 919 768-4730

PORIES, WALTER JULIUS GS /TS 074
203 CHOWAN ROAD A AC
GREENVILLE 27834 919 551-4629
FAX 919 551-5775

PORTER, CEDRIC WARREN, JR. OBG /GPM 011
86 VICTORIA ROAD A AC
ASHEVILLE 28801 704 253-6600

PORTER, CHARLES ALEXANDER OBG 060
2801 RANDOLPH RD., STE 200 AC
CHARLOTTE 28211 704 377-5675

PORTER, RICHARD ALLISON FP 045
1107 WOODMONT DR. A L/RT
HENDERSONVILLE 28739

PORTER, WILLIAM G. IM /HEM 060
PO BOX 32861 A AC
CHARLOTTE 28232 704 338-3165

POSSINGER, CLIVE FRANCIS, JR. IM 045
P. O. BOX 217 AC
NAPLES 28760 704 684-1030

POSTLETHWAIT, RAYMOND W. GS 032
143 PINECREST RD. A L/RT
DURHAM 27705 919 489-8865

POSTON, ROBERT LEWIS FP 070
1142 N. ROAD STREET AC
ELIZABETH CITY 27909 919 338-4117

POTEAT, HUBERT MCNEILL, JR. GS 051
P. O. BOX 88 A L/RT
SMITHFIELD 27577 919 934-2524

POTLURI, PRABHU 034
2050 CRAIG ST., APT. 20 A S
WINSTON-SALEM 27103 919 773-0754

POTOCKI, LANCE DEWITT FP 021
PO BOX 429 AC
EDENTON 27932 919 482-2116

POTTER, PATRICIA LYNN AN 060
6439 BENTRIDGE DR. A AC
CHARLOTTE 28226 704 377-1647

POTTS, FREDERICK LATHAM, III EM 096
RT. 1 BOX 325 AC
DUDLEY 28333 919 736-7599

POTTS, JAMES MARTIN GS /TS 023
200 W. GROVER ST. A AC
SHELBY 28150 919 487-8591

POTTS, LEO JOSEPH P 011
HIGHLAND HOSPITAL A * AC
PO BOX 1101
ASHEVILLE 28802 704 254-3201

POTTS, RONALD SARGENT PTH 080
115 WAVERLY CIRCLE A P AC
SALISBURY 28144 704 633-7765

POWE, CHARLES EDWIN, JR. OBG 060
1718 E. 4TH ST., #907 AC
CHARLOTTE 28204 704 365-0470
FAX 919 372-4069

POWELL, ALVIN CALDWELL IM /NEP 041
111 W. WENDOVER AVE. C
GREENSBORO 27401 919 379-9708

POWELL, BAYARD LOWERY ON /HEM 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-2946

POWELL, BENJAMIN PHILIP AN 011
421 VANDERBILT ROAD A AC
ASHEVILLE 28803 704 252-1016

POWELL, CHARLES S. VS /GS 074
ECU SCHOOL OF MEDICINE A AC
DEPT. OF SURGERY
GREENVILLE 27858 919 551-4667

POWELL, DAVID CLIFTON GS 092
1101 DRESSER COURT AC
RALEIGH 27609 919 876-2010

POWELL, DON WATSON GE /IM 032
UNC, DEPT. OF MED. AC
CB 7005, 3029 OLD CLINIC BLDG.
CHAPEL HILL 27599 919 966-4064
FAX 919 966-7592

POWELL, E. CHARLES OBG 096
100 WOOTEN POINT ROAD A L
GOLDSBORO 27530 919 778-2692

POWELL, GWENDOLYN S. OM /IM 032
GLAXO INC. A AC
FIVE MOORE DR.
RESEARCH TRIANGLE PK 27709 919 248-2332

POWELL, JACK GS 011
1051 JAUWPPD RPAD L/RT
ASHEVILLE 28806 704 667-3533

POWELL, JAMES BLACKMON, II HNS /PSF 011
131 MCDOWELL STREET A AC
ASHEVILLE 28801 704 254-3517
FAX 704 253-6960

POWELL, JAMES BOBBITT PTH 001
1447 YORK COURT AC
BURLINGTON 27215 919 584-5171

POWELL, JAMES MEYERS, JR. P /CHP 060
2315 RANDOLPH ROAD AC
CHARLOTTE 28207 704 377-4243

POWELL, JESS AVERETTE,III DR 023
201 GROVER STREET A AC
SHELBY 28150 704 487-3141

POWELL, KENNETH ALTON FP 012
P. O. BOX 330 AC
RUTHERFORD COLLEGE 28671 704 874-2107

POWELL, ROBERT NARROWAY IM 070
1142 N. ROAD STREET AC
ELIZABETH CITY 27909 919 338-4117

POWELL, THOMAS EDWARD, III PTH 001
P. O. BOX 2536 A P AC
BURLINGTON 27216 919 227-1235

POWELL, WILLIAM CARLYLE PD 026
P. O. BOX 53127 A AC
FAYETTEVILLE 28305 919 484-3121

POWELL, WILLIAM ERNEST, JR. GP 057
1 CHESTNUT STREET A AC
MARS HILL 28754 704 689-2581

POWELL, WILLIAM FLYNN OPH /OTO 011
62 GERTRUDE PLACE A L/RT
ASHEVILLE 28801 704 252-8931

POWELL, WILLIAM STEWART U 081
117 TRYON RD., STE. B A AC
RUTHERFORDTON 28139 704 286-1445

POWER, BHASKAR DAYARAM OTO /A 042
PO BOX 1132 A AC
ROANOKE RAPIDS 27870 919 535-1411

POWERS, BARRY DR 074
306 STANWOOD DRIVE AC
GREENVILLE 27834 919 752-5000

POWERS, STEPHEN KENT NS 032
UNC, 148 CLINICAL SCI. BLDG. A AC
CHAPEL HILL 27599 919 966-1374
FAX 919 966-6627

POZNER, ROBERT S. IM 011
445 BILTMORE CTR. STE. 305 A AC
ASHEVILLE 28801 704 253-1482

PRANGE, ARTHUR JERGEN, JR. P 032
NCMH, DEPT. OF PSYCHIATRY A AC
CHAPEL HILL 27599 919 966-1480

PRASAD, N. HERAMBA EM 074
DEPT. OF EMERGENCY MED. A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2154

PRATHER, DONNA LYNN P 032
311 BLUERIDGE RD. AC
CARRBORO 27510 919 929-6519

†PRATHER, FONZO GOFF GP 011
5 FAIRWAY DRIVE A
DECEASED--10-19-90
ASHEVILLE 28805 704 298-4071

PRATT, LAURA WINSTEAD FP 067
329 TRAILS END RD., UNIT #3 A AC
WILMINGTON 28409 919 392-6672

PRATT, REBECCA ANN 032
1908 CONVENT PL. #8 S
NASHVILLE, TN 37212 919 684-7590

PREFONTAINE, J. EDOUARD OPH 041
830 SOUTHEASTERN BLDG. A L/RT
GREENSBORO 27401 919 272-3523

PRENDERGAST, MARK L. OTO 049
707 BRYANT ST. A AC
STATESVILLE 28677 704 873-5224

PRENTICE, ROBERT DEREK FP 032
3116 N. DUKE ST. AC
DURHAM 27704 919 479-6300

PRESSLY, CLAUDE LOWRY GS /TS 060
1863 CASSAMIA PL. A L/RT
CHARLOTTE 28211 704 376-0327

PRESSLY, JAMES ALLEN ORS 060
2300 RANDOLPH RD. S-B AC
CHARLOTTE 28207 704 375-5955

PRESSLY, JAMES PATTERSON OPH 060
2620 E. 7TH ST. STE 300-C AC
CHARLOTTE 28204 704 377-4448

PRESSON, THOMAS LEMUEL ORS 041
PO BOX 14580 A AC
315 W. WENDOVER AVE.
GREENSBORO 27415 919 275-0724

PRESTA-CARNES, MARLA MARIE OBG 013
211 LE PHILLIP CT., NE A AC
CONCORD 28025 704 786-1115

PRESTON, EDWIN THORNTON ORS 032
101 CONNER DR., STE. 200 A AC
CHAPEL HILL 27514 919 942-3171
FAX 919 967-3860

PRESTON, RONALD ALLYN IM 025
PO BOX 2566 A AC
NEW BERN 28562 919 633-1010

PREVATTE, STEVEN HAROLD PD 074
300 BETHESDA DR. AC
GREENVILLE 27834 919 752-7141

PRICE, ANDREW RICHARD IM 098
1901 S. TARBORO ST. A AC
PO BOX 3188
WILSON 27893 919 243-5505

PRICE, BILLY LEE, JR. 074
3260 LANDMARK ST. C-6 S
GREENVILLE 27834 919 756-5425

PRICE, GRADY EDWIN ORS 060
120 PROVIDENCE RD. A AC
CHARLOTTE 28207 704 377-0351

PRICE, HARVEY CRAIG HNS 092
3100 BLUE RIDGE RD., STE. 201 AC
RALEIGH 27607 919 782-8955

PRICE, JAMES LOUIS, III OBG 065
1612 DOCTOR'S CIRCLE AC
WILMINGTON 28401 919 763-9015

PRICE, ROBERT EDWIN, JR. NS 032
PO BOX 15249 A AC
3901 ROXBORO ST.
DURHAM 27704 919 479-4100

PRICE, ROBERT EUGENE OPH 032
109 CONNER DR., STE. 2207 C
CHAPEL HILL 27514 919 933-1294

PRICE, THOMAS BAKER GS 041
510 N. ELAM AVE., STE. 303 A AC
GREENSBORO 27403 919 378-9811
FAX 919 275-2055

PRICHARD, ELIZABETH HYDE PTH 034
300 S. HAWTHORNE RD. A R
DEPT. OF PATHOLOGY
WINSTON-SALEM 27103 919 748-4311

PRICHARD, ROBERT WILLIAMS PTH 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-2649
FAX 919 748-4204

PRIDE, HAROLD SYLVESTER FP /PD 060
700 E. STONEWALL #200 AC
CHARLOTTE 28202 704 377-3015

PRINCE, GEORGE EDWARD PD /PH 036
3709 ST. REGIS DR. A AC
GASTONIA 28054 704 853-5290

PRINGLE, JOSEPH ROSS, JR. PD 001
711 HERMITAGE RD. AC
BURLINGTON 27215 919 229-5341

PRINTZ, DON RALPH D 011
10 DEERFIELD ROAD A L/RT
ASHEVILLE 28803 704 274-1234

PRITCHARD, DOUGLAS DUSSEL AN 049
PO BOX 801 AC
STATESVILLE 28677 919 873-0281

PRITCHARD, WILLIAM LEE NS 026
1309 MEDICAL DR. #101 AC
FAYETTEVILLE 28304

PRITCHETT, DOUGLAS BRIAN IM /GE 092
3100 DURALEIGH RD. AC
RALEIGH 27607 919 881-5300

PRITCHETT, EUGENIA HARPER IM /GER 032
3229 LOCHINVAR R
DURHAM 27705 919 493-2854

PRITCHETT, NEWTON GEORGE IM 092
2800 BLUE RIDGE, STE. 205 L/RT
RALEIGH 27607 919 782-0414

PRITCHETT, RILDIA JONES OBG 092
4420 LAKE BOONE TR. #301 C
RALEIGH 27607 919 781-7450

PRIVETTE, DOUGLAS CRAIG CD /IM 074
326 DUPONT CR. P AC
GREENVILLE 27858 919 752-6101

PROCTER, WILLIAM IVAN IM 092
3900 BROWNING PLACE AC
RALEIGH 27609 919 781-9650

PROCTOR, CAMILLA ALLYN PUD 064
3009 ZEBULON ROAD AC
ROCKY MOUNT 27801 919 443-2552

PROCTOR, RICHARD CULPEPPER P 034
1244 ARBOR RD., #211 A L/RT
WINSTON-SALEM 27104 919 723-6020

PROCTOR, STEPHEN DUANE IM /PUD 080
611 MOCKSVILLE AVE. AC
SALISBURY 28144 704 633-7220

PROIA, ALAN DAVID PTH 032
4118 DEEPWOOD CIRCLE A * AC
DURHAM 27707 919 489-3161

PROSNITZ, LEONARD R. TR 032
BOX 3085, DUMC AC
DURHAM 27710 919 684-3805
FAX 919 684-3953

PROUGH, DONALD SANDERSON AN /CC 034
1890 RUNNYMEADE RD. A AC
WINSTON-SALEM 27104 919 748-4684

PRUETT, STEVEN WARD 034
2431 LYNDHURST AVE. A * S
WINSTON-SALEM 27103 919 721-0614

PRUITT, JERRY L. D 018
220 18TH ST. CIRCLE SE AC
HICKORY 28602 704 328-6185
FAX 704 328-4044

PRUITT, RONALD ANTHONY ORS 001
316 N. GRAHAM-HOPEDALE RD. AC
BURLINGTON 27217 919 227-3621
FAX 919 227-2206

PRYOR, ROBERT E. IM 000
199 HOSPITAL DR. STE. #5 A AC
GALAX, VA 24333 703 236-6136

PUCKETT, JAMES BUTLER IM /ON 011
390 COPPERFIELD BLVD. A AC
CONCORD 28025 704 782-3135

PUGH, JAMES EDWIN, JR. N 060
MECKLENBURG NEUROLOGICAL ASSOC A AC
1900 RANDOLPH RD., STE. 1010
CHARLOTTE 28207 704 334-7311

PUGH, RAEFORD THEODORE FP 007
619 E. 12TH STREET AC
WASHINGTON 27889 919 946-6486

PUGH, VERNON WATSON, JR. PD 092
1321 OBERLIN ROAD A AC
RALEIGH 27608 919 828-4747

PULEO, ELLEN ANNE OBG 063
CCNC, P. O. BOX 786 AC
PINEHURST 28374

PULLIAM, THOMAS JACKSON IM /GE 034
6525 BANBURY RD. A R
BALTIMORE, MD 21239 301 377-3086

PULLY, ROSE FP 054
805 ROUNTREE ST. A L/RT
KINSTON 28501 919 523-2569

PURCELL, WILLIAM ROBERT PD 083
418 KING STREET AC
LAURINBURG 28352 919 276-7570

PURUSHOTHAMAN, CHANDROTH V. CD /IM 016
#4 MEDICAL PARK A AC
MOREHEAD CITY 28557 919 247-5426

PURVIS, JOHN ROSS FP 074
ECU SCH. OF MEDICINE A AC
DEPT. OF FAM. MEDICINE
GREENVILLE 27858 919 551-5452

PURVIS, JOSEPH D.,III IM /ON 032
3030 CORNWALLIS RD. AC
RESEARCH TRIANGLE PK. 27709 919 248-4642

PURVIS, WILLIAM HENRY U 053
1816 DOCTORS DR. A AC
SANFORD 27330

PUSTROM, EINAR P /CHP 036
239 WILMONT ROAD AC
GASTONIA 28054 704 867-2338

PUTMAN, CHARLES EDGAR R /IM 032
DUMC, 203 ALLEN BLDG. A AC
DURHAM 27710 919 684-3403

PUTNAM, CHERYL H. 074
203 EVANSWOOD DR. S
GREENVILLE 27858 919 756-9861

PUTNEY, ROBERT HUBBARD, JR. FP 098
P. O. BOX 519 A L
ELM CITY 27822 919 236-4341

PYERITZ, ERIC ALLEN FP 011
501 BILTMORE AVE. AC
ASHEVILLE 28801 704 258-0670

PYLES, JERALD DENNIS IM 045
510 7TH AVENUE, WEST A AC
HENDERSONVILLE 28739 704 692-2231

PYRON, KATHARINE ANDREWS IM 032
5107 ORCHARD DR., STE. 205 AC
DURHAM 27713 919 383-1518

QUALHEIM, ROBERT E. NEP /IM 018
1985 TATE BLVD. AC
750 FIRST PLAZA
HICKORY 28602 704 327-7788

QUEEN, HUGH OSCAR FP 077
315 CHARLOTTE STREET AS
HAMLET 28345 919 582-3241

QUEEN, KATE TAYLOR RHU /IM 044
102 HOSPITAL DR. AC
CLYDE 28721 704 452-0331

QUEEN, LAURINDA LEE D 092
4505 FAIR MEADOWS LN.,STE.103 AC
RALEIGH 27607 919 783-7877

QUERY, LUKE WALTER, JR. IM 076
1420 WESTMONT DR. A L/RT
ASHEBORO 27203 919 629-2009

QUIGLESS, MILTON DOUGLAS, JR. GS 092
100 SUNNYBROOK ROAD A * AC
P. O. BOX 14445
RALEIGH 27620 919 281-6085

QUIGLESS, MILTON DOUGLAS, SR. GP /D 033
P. O. BOX 368 AC
TARBORO 27886 919 823-2112

QUINN, CLIFTON LEE P 092
3125 GLENWOOD PROF VILLAGE A AC
RALEIGH NC 27608 919 782-5615

QUINN, CORBETT LATIMER FP /PH 031
112-116 N. R.R. ST. AC
MAGNOLIA 28453 919 289-4165

QUINN, MARSHALL K. FP 031
PO BOX 189 AC
MAGNOLIA 28453 919 289-4165

QUINN, ROBERT P. OTO /HNS 013
25 LAKE CONCORD RD. * AC
CONCORD 28025 704 782-6673

QURESHI, AFTAB AHMAD GS /OBG 008
226 S. ACADEMY ST. A AC
AHOSKIE 27910 919 332-2244

QURESHI, AYYAZ MAHMOOD IM /ON 079
505 N. THIRD AVE. AC
MAYODAN 27027 919 548-2456

QURESHI, FAIQA AFTAB PD 008
222 S. ACADEMY ST. AC
AHOSKIE 27910 919 332-3403

RAAB, MARY JERISTA ON /HEM 074
DEPT. OF MEDICINE A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2383

RAAB, SPENCER O. ON /HEM 074
DEPT. OF MEDICINE AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2383

RABEN, MILTON TR 034
N. C. BAPTIST HOSPITAL AC
WINSTON-SALEM 27103 919 748-4981

RABIL, DONALD MICHAEL IM /PUD 064
100 NASH MEDICAL ARTS MALL AC
ROCKY MOUNT 27801 919 443-9084

RABIL, WILLIAM EDMOND GS /GYN 034
1755 BUENA VISTA RD. L/RT
WINSTON-SALEM 27104 919 722-3691

RABOLD, LEONARD JAMES IM 041
209 HOMEWOOD AVENUE A L/RT
GREENSBORO 27403 919 379-4025

RABON, F. SCOTT FP 092
4713 PEMBERTON DR. AC
RALEIGH 27609 919 782-0146

RACKLEY, JAMES WAYNE PD 034
250 CHARLOIS BLVD. AC
WINSTON-SALEM 27103 919 768-4730

RADFORD, HOWARD LEE FP 081
2249 BBRISBAYNE CIR. A L/RT
RALEIGH 27615 704 657-5221

RADFORD, WANDA LEE OBG 092
REX FAMILY BIRTH CTR.,STE. 301 A AC
RALEIGH 27607 919 781-7450

RAFT, ELIZABETH VANCE CHP /P 032
33 KIMBERLY DRIVE AC
DURHAM 27707 919 489-7011

RAGAZ, FLORIAN JOHN GP /CD 059
315 E. COURT STREET AC
MARION 28752 704 652-4420

RAGOZZINO, MARK WM. R 065
2212 DELANEY AVE. A AC
WILMINGTON 28403 919 762-3882

RAIFORD, FLETCHER LINDSAY PD 045
1023 FOREST HILL RD. A L
HENDERSONVILLE 28739 704 693-3296

RAINES, LAWRENCE MERIAL,III 032
PO BOX 3133 A S
CHAPEL HILL 27515 919 942-7893

RAKFAL, SUSAN MAFFEY RO 074
ECU SCHOOL OF MED. AC
RADIATION ONCOLOGY CTR.
GREENVILLE 27858 919 551-2900

RALLIS, MICHAEL GEORGE IM 065
301 S. MCNEIL ST. A P * AC
PO BOX 1179
BURGAW 28425 919 259-5011

RAM, CECIL CASPER U 049
774 HARTNESS ROAD A P AC
STATESVILLE 28677 704 873-3231

RAMBO, V. BIRCH GS 006
235 INMAN DR., ZAIRE H
DECATUR, GA 30030

RAMPULLA, ELLIOT JOHN AN 026
2220 WESTHAVEN DR. AC
PO BOX 65137
FAYETTEVILLE 28306 919 323-5491

RAMQUIST, NEIL ALBERT DR 092
4101 HENRY J. MENNINGER WYND. A AC
RALEIGH 27612 919 783-3023

RAMSDELL, CHARLES MICHAEL RHU /IM 074
1705 W. 6TH ST., BLDG. E A AC
GREENVILLE 27834 919 752-6101

RAMSEY, EDWARD ALLISON PD 064
124 FOYE DRIVE AC
ROCKY MOUNT 27804 919 443-4031

RAND, CECIL HOLMES, JR. IM /PUD 074
1800 W. FIFTH STREET AC
GREENVILLE 27834 919 752-3185

RANDALL, MARCUS EDDIE ON /TR 034
300 S. HAWTHORNE RD. AC
DIV. RADIATION ONCOLOGY
WINSTON-SALEM 27103 919 748-4981
FAX 919 748-5972

RANDOLPH, MICHAEL ANTHONY IM 026
1001 NEW MARKET CT. AC
FAYETTEVILLE 28314 919 432-8202

RANEY, RICHARD BEVERLY, SR. ORS 032
N. C. MEMORIAL HOSPITAL A L/RT
CHAPEL HILL 27599 919 966-2030

RANGAR, JITINDER SINGH DR /NM 051
P. O. BOX 58 AC
SMITHFIELD 27577 919 934-8171

RANKIN, CHARLES ALBERT, JR. OBG 011
80 VICTORIA ROAD A AC
ASHEVILLE 28801 704 255-8900

RANKIN, PRESSLEY ROBINSON, JR. FP 077
P. O. BOX 40 A * L
ELLERBE 28338 919 652-3321

RANKIN, RICHARD BRANDON, JR. OPH 013
500 LAKE CONCORD RD., NE A AC
CONCORD 28025 704 782-1127

RANKIN, RICHARD EUGENE FP /GP 036
RANKIN CLINIC AC
MOUNT HOLLY 28120 704 827-3031

RANKIN, RUFUS PINKNEY, JR. GYN 060
1718 E. FOURTH ST., #307 AC
CHARLOTTE 28204 704 332-8103

RANN, EMERY LOUVELLE FP 060
PO BOX 16179 A L/RT
CHARLOTTE 28297 704 394-3275

RANSOM, JAMES LAURENCE NPM /PHO 041
1200 N. ELM ST. AC
GREENSBORO 27401 919 379-3977

RANSON, JOHN LESTER, JR. IM 060
335 N. CASWELL ROAD A L/RT
CHARLOTTE 28204 704 376-4852

RAO, INNANJE RAVINDRANATH CD /IM 060
2330 RANDOLPH RD A AC
CHARLOTTE 28207 704 377-0575

RAO, LAKSHMAN IM 043
518-B E. H STREET AC
ERWIN 28339 919 897-5591

RAPPAPORT, ERIC OBG 092
3320 WAKE FOREST RD., #120 AC
RALEIGH 27609

RAPPAPORT, TODD 034
1608-C NORTHWEST BLVD. A S
WINSTON-SALEM 27103

RARDIN, DUFF ANDREW N 011
190-W DOCTORS BLDG. A AC
ASHEVILLE 28801 704 252-6066

RARDIN, THOMAS EDWIN RHU 011
43 OAKLAND ROAD A AC
ASHEVILLE 28801 704 253-2824

RASBERRY, EDWIN ALBERT, JR. IM 098
1111 SALEM ST. L/RT
WILSON 27893 919 291-7001

RATCHFORD, GEORGE RUFUS, JR. IM 064
100 NASH MEDICAL ARTS MALL AC
ROCKY MOUNT 27804 919 443-9084

RATHBUN, LEWIS STANDISH GYN 011
76 FOREST RD. A L/RT
ASHEVILLE 28803 704 274-0748

RATHBUN, MARY ANNE NPM /PD 060
CAROLINAS MEDICAL CENTER A AC
P. O. BOX 32861
CHARLOTTE 28232 704 355-3156

RATHMELL, JAMES PHILLIP 034
910 WATSON AVE. R
WINSTON-SALEM 27103 919 748-4498

RAU, BRUCE WILLIAM P 034
2990 BETHESDA PL. STE. 605-B A AC
WINSTON-SALEM 27103 919 768-8281

RAUCK, RICHARD LEE AN 034
1740 VIRGINIA RD. A AC
WINSTON-SALEM 27104 919 748-2591

RAVE, CECELIA MARIE PD 011
77 MCDOWELL ST. AC
ASHEVILLE 28801 704 254-5320

RAVENEL, JAMES GAILLARD 034
1919 ACADEMY ST. #21 S
WINSTON-SALEM 27103 301 657-8961

RAVENEL, SAMUEL DUBOSE PD 040
624 QUAKER LANE A AC
HIGH POINT 27262 919 882-4171

RAVIN, CARL ERIC R 032
BOX 3808, DUMC A AC
DURHAM 27710 919 681-2711
FAX 919 681-5636

RAWL, RICHARD PRESTON FP 074
PO BOX 549 A AC
BETHEL 27812 919 825-0355

RAWLS, WILLIAM CLEATON, JR. OBG 070
1134 N. ROAD ST. A P AC
ELIZABETH CITY 27909 919 338-2151

RAWLS, WILLILAM CLEATON,JR. OBG 025
801 MCCARTHY BLVD. A AC
NEW BERN 28560 919 338-2151

RAY, HUGH LEE AN 095
HOUND EARS CLUB AC
EVERGREEN DRIVE, BOX 188
BLOWING ROCK 28605 704 963-4405

RAY, JEFFREY ALLEN 074
208 ASH ST., APT. #4 A S
GREENVILLE 27858 919 830-6686

RAY, V. GAIL EM 074
DEPT. OF EMERGENCY MED. A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4757

RAY, VERONICA JOSEPHINE FORBES IM 032
1301 FAYETTEVILLE ST. AC
DURHAM 27707 919 683-1316

RAY, WALTER CARROLL GYN 041
104 W. NORTHWOOD ST. A P * AC
GREENSBORO 27401 919 370-0988

RAYMER, JAMES BARKER GS 060
2300 RANDOLPH ROAD AC
CHARLOTTE 28211 704 376-0327

RAYMOND, KENT HOWARD IM /NEP 060
928 BAXTER ST. AC
CHARLOTTE 28204 704 374-1321

RAYNOR, B. DENISE OBG 042
103 BROOKSIDE CT. AC
ROANOKE RAPIDS 27870 919 536-2557

RAYNOR, LEIGHTON ALVIN OPH 012
335 E. PARKER RD. AC
MORGANTON 28655 704 433-6220

READLING, RANDY DARENE 074
1705 VINEYARD DR. N #2 S
WILSON 27893 919 732-9596

REAMES, PATRICK MARTIN R 060
PO BOX 33549 AC
CHARLOTTE 28233 704 384-4056

REAVES, CHARLES EDWIN D /DMP 060
1718 E. FOURTH ST. #605 A AC
CHARLOTTE 28204 704 333-2147

REAVES, LEONARD ERATUS, III IM /GE 026
2841 SKYE DR. M
FAYETTEVILLE 28303 919 868-5166

REBSAMEN, SUSAN LYNNE DR 032
29-A, 300 WOODCROFT PKWY. R
DURHAM 27713 919 966-1461

RECKER, SCOTT F. PM 074
PO BOX 6028 A AC
REGIONAL REHABILITATION CTR.
GREENVILLE 27834 919 551-4440
FAX 919 551-9158

RECKLESS, JOHN BRIAN P /PYM 032
1816 FRONT ST., STE. 310 E/RT
DURHAM 27705 919 383-1502

RECORD, CHARLES LEO FP 034
PO BOX 567 A AC
KERNERSVILLE 27285 919 993-8181

RECORD, S. LEO, JR. FP 034
P. O. BOX 627 A AC
KERNERSVILLE 27284 919 993-8181

REDDING, MARSHALL SIMMS OPH 070
1142 N. ROAD ST. AC
PO BOX 1402
ELIZABETH CITY 27909 919 335-5446

REDDY, AMARENDRA BUSA CD /IM 092
3020 NEW BERN AVE., STE. 410 A AC
RALEIGH 27610 919 833-5111

REDDY, PARVATA CHINNA P. AN 032
PO BOX 15609 A AC
DURHAM CO. GEN. HOSPITAL
DURHAM 27704 919 471-3411

REDDY, PUTLUR RAMACHANDRA IM /ON 091
MEDICAL ARTS BUILDING AC
RUIN CREEK ROAD
HENDERSON 27536 919 492-6127

REDDY, SREENIVAS MADDURI IM /ON 012
PO BOX 727 A AC
RUTHERFORD COLLEGE 28671 704 874-2921

REDICK, LLOYD FRANKLIN AN 032
BOX 3094, DUMC A P AC
DURHAM 27710 919 681-3345

REDMANN, GREG ALPHONSE 032
BOX 2905, DUMC R
DURHAM 27710 919 684-8111

REDWINE, JAMES DANIEL GP 029
6 WILLIAMS CIRCLE A L/RT
LEXINGTON 27292 704 246-2658

REEB, KENNETH GEORGE FP 032
UNC, FAMILY MED. CB 7595 AC
CHAPEL HILL 27599 919 966-3711

REECE, NEIL SCOTT 034
2339-C SALEM COURT A S
WINSTON-SALEM 27103 919 722-1467

REED, JAMES CROFT R 034
300 S. HAWTHORNE RD. A AC
DEPT. OF RADIOLOGY
WINSTON-SALEM 27103

REED, JOHN WILLIAM OPH 034
BOWMAN GRAY, DEPT. OF OPH AC
WINSTON-SALEM 27103 919 748-4091
FAX 919 748-4204

REEDER, ALTON ALFRED GE /IM 040
624 QUAKER LN., STE. C-103 AC
HIGH POINT 27262 919 885-8159

REEDER, PAUL ARLINGTON GS 039
1026 COLLEGE STREET A AC
OXFORD 27565 919 693-7066

REEN, BERNARD MURTY,III CD 060
1718 E. 4TH ST., #501 AC
CHARLOTTE 28204 704 343-9800

REES, MICHAEL STEVENS IM 092
3101 ESSEX CIRCLE, BLDG. E AC
RALEIGH 27608 919 782-2631

REES, TERRY TAYLOR GS /TS 061
108 HOSPITAL DR. A AC
SPRUCE PINE 28777 704 765-2665

REEVES, JULIE ANN 074
1610 TREYBROOKE CIRCLE A S
GREENVILLE 27834 919 830-6812

REEVES, WILLIAM JOHN PTH 013
CABARRUS MEM. HOSP. A P AC
CONCORD 28025 704 786-2111

REEVES, WM. CHARLES CD 074
ECU SCHOOL OF MEDICINE AC
SECTION OF CARDIOLOGY
GREENVILLE 27858 919 757-4651

REGISTER, JOHN FRANCIS ORS 041
310 ROCKFORD ROAD A L
GREENSBORO 27401 919 274-0161

REHMAN, NAJEEB UR IM 079
406 PIEDMONT ST. AC
REIDSVILLE 27320 919 342-6196

REIBEL, DONALD BAUMANN ORS 092
P. O. BOX 10707 A AC
RALEIGH 27605 919 781-5600

REICHERT, DANIEL R. 000
5583 WHITHORN CT. R
FAYETTEVILLE 28311 919 432-1908

REICHLING, GEORGE HENRY D 067
300 WESTERN BLVD. AC
JACKSONVILLE 28540 919 577-7288

REICHLING, PIRKKO ESTERI GP 067
300 WESTERN BLVD. AC
JACKSONVILLE 28540 919 353-0176

REID, CAROL ROGERS AN 097
P.O. BOX 1076 C
WILKESBORO 28697 919 838-1144

REID, CHARLES FREDRIC U 034
1806 S. HAWTHORNE RD. A AC
PO BOX 24369
WINSTON-SALEM 27114 919 768-0735

REID, CHARLES HAMILTON,JR. IM 034
215 PLYMOUTH AVE. A L/RT
WINSTON-SALEM 27104 919 768-0994

REID, JAMES EDWARD, JR. 029
103 W. 6TH AVE. A AC
LEXINGTON 27292 919 246-5161

REID, JOHN HEYWARD D /FP 060
2918 HEATHGATE RD. C
CHARLOTTE 28226 704 551-4209

REID, RICHARD HAROLD DR 034
3155 MAPLEWOOD AVE. A C
WINSTON-SALEM 27103 919 765-2702

REID, ROBERT LEARY FP /CD 055
110 DOCTOR'S PARK AC
LINCOLNTON 28092 704 735-7414

REID, ROBERT LEARY, JR. FP 055
110 DOCTOR'S PARK AC
LINCOLNTON 28092 704 735-7413

REID, STEVEN HUNTER DR 041
PO BOX 29327 A AC
GREENSBORO 27429 804 741-5748

REID, WILLIAM JOSEPH FP /ALD 041
2301 DANBURY ROAD A L
GREENSBORO 27408 919 274-6171

REID, WILLIAM KIRKPATRICK IM /ON 040
507 LINDSAY ST. AC
HIGH POINT 27262 919 883-0029

REIDA, RONALD JACK EM /PD 025
4514 GREENVIEW RD. A AC
NEW BERN 28562 919 637-4016

REIFLER, BURTON V. P /GER 034
300 S. HAWTHORNE RD. A * AC
WINSTON-SALEM 27103 919 748-4552

REIGEL, HAIDEE IM 092
2820 HALF HITCH TRAIL AC
RALEIGH 27615 919 848-4434

REIN-WARREN, KEMPER 074
1717 CIRCLE DR. A S
GREENVILLE 27858 919 355-0734

REINDOLLER, ROBERT WILLIAM GE /IM 060
1900 RANDOLPH RD., STE. 310 A AC
CHARLOTTE 28207 704 372-7974
FAX 704 372-4966

REITER, RICHARD MARTIN GS 082
603 BEAMON ST. A P AC
CLINTON 28328 919 592-8711

REKUC, GREGORY M. IM 092
3320 WAKE FOREST RD. AC
RALEIGH 27609 919 872-4850

REMINGTON, JOHN LAUREN DR 065
2101 S. LIVE OAK PARKWAY * AC
WILMINGTON 28403 919 762-3882

RENALDO, DONALD PHILIP OPH 060
1718 E. FOURTH ST. #908 A P * AC
CHARLOTTE 28204 704 376-5424

RENDALL, JOHN LLOYD, III ORS 041
108 KEMP ROAD, EAST AC
GREENSBORO 27410 919 275-6318

RENDLEMAN, DAVID ATWELL, III ORS 092
321 CAMBRIDGE WOODS WAY A AC
RALEIGH 27608 919 872-5296

RENDLEMAN, DAVID ATWELL, JR. FP 080
P. O. BOX 4327 L
SALISBURY 28144 704 633-0844

RENDT, KAREN ELIZABETH OSSESIA 032
139 MALLARD COURT R
CHAPEL HILL 27514 919 684-2949

RENFROE, MELANIE STRICKLAND FP 034
PO BOX 385 AC
MOCKSVILLE 27028 704 634-7505

RENFROE, WILLIAM O., JR. FP 034
DEPT. OF FAMILY MED. A R
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-2238

RENOUARD, ROBERT SPENCER 034
1640 NORTHWEST BLVD., STE. 4 A S
WINSTON-SALEM 27104 919 761-1929

RENZ, ANDREW CRAIG 060
CAROLINAS MED. CTR. R
PO BOX 32861
CHARLOTTE 28232 704 338-3156

RERYCH, STEPHEN KARL GS /TS 011
M105 DOCTORS BUILDING A AC
ASHEVILLE 28801 704 253-1529

REVES, JOS. GERALD AN 032
BOX 3094, DUMC A AC
DURHAM 27710 919 681-6646

REWIS, JAMES CLAY OBG 064
132 FOY DR. C
ROCKY MOUNT 27804 919 443-6622

REYNOLDS, ERNEST HAROLD FP 079
P. O. BOX 330 A L
REIDSVILLE 27320 919 342-2873

REYNOLDS, FRANK RUSSELL PD 065
1613 DOCK STREET A P * L
WILMINGTON 28401 919 763-4272

REYNOLDS, JAMES WOODROW, JR. OTO/A 080
826 W. HENDERSON STREET AC
SALISBURY 28144 704 633-8276

REYNOLDS, JOHN LAURENCE AN 023
404 MELODY LANE AC
SHELBY 28150 704 482-5716

REYNOLDS, JOHN OZMENT, JR. OPH 080
410 MOCKSVILLE AVE. A AC
SALISBURY 28144 704 637-0158

RHOADES, VADE G. D 034
2240-98 CLOVERDALE AVE. * AC
W-S PROF. BLDG. PO BOX 5128
WINSTON-SALEM 27113 919 723-1834

RHOADS, EDWARD JOHN P /PYA 041
606 WALTER REED DR. AC
GREENSBORO 27403 919 299-0511

RHOADS, JOHN MCFARLANE P /PYA 032
163 MONTROSE L/RT
DURHAM 27707 919 493-7847

RHODES, CECIL DAVID, JR. IM /A 098
P. O. BOX 27894-0309 AC
WILSON 27894 919 237-4358

RHODES, CHARLES WINSTON W. FP 013
PO BOX 1058 AC
MOUNT PLEASANT 28124 704 436-6521

RHODES, JAMES SLADE, JR. GP 007
407 N. SMITHWICK ST. A L/RT
WILLIAMSTON 27892 919 792-2036

RHODES, JOHN FLINT U 092
2800 BLUE RIDGE BLVD. STE. 403 A P AC
RALEIGH 27607 919 781-7113

RHODES, JOHN FLINT, JR. 074
J-4 DOCTOR'S PARK A S
GREENVILLE 27834 919 830-1646

RHYNE, ALFRED LEONARD, III ORS 060
2600 E. 7TH STREET A AC
CHARLOTTE 28204 704 372-9820

RHYNE, JAMES MOODY IM /N 049
757 BRYANT ST. * AC
STATESVILLE 28677 704 873-5658

RHYNE, JANELLE AROLYN IM /ID 065
1202 MEDICAL CENTER DR. AC
WILMINGTON 28401 919 341-3344

RHYNE, JIMMIE LEE PH /PD 092
7813 HARDWICK DR. * AS/RT
RALEIGH 27615 919 847-1380

RIBNER, BRUCE STEVEN ID /IM 011
109 BEE ST. AC
CHARLESTON VA MED. CTR.
CHARLESTON, SC 29403 803 577-5011

RICCI, DANIEL MICHAEL IM 031
205 E. MURPHY ST. A AC
WALLACE 28466 919 285-4100

RICE, A. DOUGLAS PD 032
706 E. CONSTITUTION DR. A L/RT
DURHAM 27705 919 489-9158

RICE, DAVID GRAYBEAL PD 034
3175 MAPLEWOOD AVE. AC
WINSTON-SALEM 27103 919 768-7030

RICE, EDMOND LEE GS 036
UNITED CHRISTIAN HOSPITAL A H
LAHORE, WEST PAKISTAN

RICE, JAMES EDWIN ORS 063
PO BOX 1650 A C
PINEHURST 28374 919 295-4887

RICE, JOHN RUSSELL RHU 032
BOX 3383, DUMC A AC
DURHAM 27710 919 684-3313

RICE, LUCIAN CANDLER, JR. IM 011
147 ASHELAND AVENUE A AC
ASHEVILLE 28801 704 258-1188

RICE, REED PORTER DR 032
DUKE HOSPITAL A AC
DURHAM 27710 919 684-2711

RICE, WILLIAM CHARLES U 060
1012 S. KINGS DR., STE. 806 A AC
CHARLOTTE 28283 704 334-6449

RICE, WILLIAM YATES, III 034
706 FRIAR TUCK ROAD A R
WINSTON-SALEM 27104 919 748-2011

RICH, CHARLES BOYCE, JR. IM 060
212 S. TRYON ST., STE. 1500 A AC
CHARLOTTE 28281 704 333-6544

RICH, KENNETH J. NS 092
3320 WAKE FOREST RD. STE. 410 A AC
RALEIGH 27609 919 850-9911

RICHARDS, FREDERICK, II ON /HEM 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4337
FAX 919 748-4204

RICHARDS, ROBERT DAY FP 098
ROUTE #2 A AC
WILSON 27893 919 291-2215

RICHARDSON, CAROL WARNER P 034
P.O. BOX 2955 AC
WINSTON-SALEM 27102

RICHARDSON, CLAY WILLIAM FP 012
PO BOX 869 AC
GLEN ALPINE 28628 704 584-2481

RICHARDSON, DAVID LEE IM 078
395 WEST 27TH STREET A AC
LUMBERTON 28358 919 739-7551

RICHARDSON, ERNEST C., JR. GYN /OBS 025
4001 TRENT PINES DR. A L/RT
NEW BERN 28560 919 633-3942

RICHARDSON, GEORGE IRVIN FP 079
P. O. BOX 1857 AC
REIDSVILLE 27320 919 349-5040

RICHARDSON, JOANN YUKI 074
D-6 DOCTORS PARK APTS. S
GREENVILLE 27834 919 830-9178

RICHARDSON, LUCILE WELSH PUD /IM 047
355 PEACH STREET L/RT
PINEBLUFF 28373 919 281-3236

RICHARDSON, MICHAEL SHELDON IM 060
7810 PROVIDENCE RD., STE. 103 AC
CHARLOTTE 28226 704 592-2543
FAX 704 355-5180

RICHARDSON, WM. JAMES ORS 032
BOX 3077, DUMC A AC
DURHAM 27710 919 684-5711

RICHTER, RICHARD LESTER AN 032
206 DUNHILL DR. R
DURHAM 27713 919 722-5918

RICKER, ALYNE THERESA PD /PDE 074
DEPT. OF PEDIATRICS AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2516

RIDDICK, GEORGE WALTON, JR. OPH 054
KINSTON CLINIC, NORTH AC
KINSTON 28501 919 522-1611

RIDDLE, WILLIAM MARK FP 074
ECU, DEPT. OF FAMILY MED. A C
FAMILY PRAC. CENTER
GREENVILLE 27858 919 752-4491

RIDGWAY, ALTON H. AN /FP 086
RFD #3, BOX 34-I A AC
EAST BEND 27018 919 699-8283

RIDLEY, MIRIAM E. OPH 060
1718 E. FOURTH ST. #908 A AC
CHARLOTTE 28204 704 376-5424

RIEFKOHL, RONALD PS /GS 032
300 CRUTCHFIELD ST. AC
DURHAM 27704 919 684-2854

RIEKER, ROBERT PAUL AN /PDC 034
318 FORSYTH MEDICAL PARK A P AC
WINSTON-SALEM 27103 919 768-3212

RIELA, ANTHONY RICHARD CHN /N 034
7630 SWEET GUM DR. AC
IRVING, TX 75063

RIEMAN, GILBERT FLETCHER OBG 065
214 CABBAGE INLET LN. A RT
WILMINGTON 28409 919 392-5903

RIERSON, LESLIE 074
322 LINDSAY DR. #D-10 A S
GREENVILLE 27834 919 765-8802

RIESER, GEOFFREY DAVIS DR 034
3155 MAPLEWOOD AVE. A * AC
WINSTON-SALEM 27103 919 760-5875

†RIGGS, MILLARD MCADOO FP 012
105 WOODSWAY LANE A
DECEASED--11-15-90
MORGANTON 28655 704 433-1585

RILEY, DAVID LINDLEY DR 013
651 CHURCH ST., N. A AC
CONCORD 28025 704 786-0214

RILEY, JAMES CHARLES IM /GE 060
125 BALDWIN AVE. A AC
CHARLOTTE 28204 704 338-6300

RILEY, KATHLEEN ANN 032
113 SNOWCREST TRAIL R
DURHAM 27707 919 684-8111

RILEY, PATRICK MICHAEL AN 007
RT. #1, BOX 214 A AC
WASHINGTON 27889 919 946-5846

RILEY, ROGER STEYER PTH 074
3704 WALNUT DR. A AC
GREENVILLE 27834 919 551-5017

RINEHART, DAVID APGAR FP 036
212 GLENWAY ST. AC
BELMONT 28012 704 825-5333

RINKER, GEORGE ERNEST PTH /IM 001
817 COLONIAL DRIVE A AC
BURLINGTON 27215 919 584-5171

RINKER, LILLIAN H. 034
245 CORONA ST., APT. #4 S
WINSTON-SALEM 27103 919 750-0626

RIOPEL, DONALD AIME PDC 060
1001 BLYTHE BLVD. #300 A AC
CHARLOTTE 28203 704 373-1813
FAX 704 373-1216

RIPLEY, ROBERT CAMERON GS 014
PO BOX 1648 A AC
401 MULBERRY ST.
LENOIR 28645 704 758-5501

RIPPY, WILLIAM DENNIS FP 001
403 TRUIT DR. * AC
PO BOX 927
ELON COLLEGE 27244 919 584-6798

RISNER, ROBERT J. OBG 076
350 N. COX ST. #6 AC
ASHEBORO 27203 919 626-6371

RITCH, DOUGLAS LAMAR IM 060
335 N. CASWELL ROAD A AC
CHARLOTTE 28204 704 376-4852

RITCH, KARL ANDREW 032
2907 SHAFTSBURY ST. S
DURHAM 27704 919 477-2977

RITCHEY, JOHN PHILLIP OPH 026
6816 UPPINGHAM ROAD AC
FAYETTEVILLE 28306 919 484-6141

RITCHIE, HENRY JACKSON GP 013
823 DAVIDSON DR. NW A AC
CONCORD 28025 704 786-3181

RITCHIE, JOHN EDWARD ORS 034
1425 PLAZA DR., BOX 25007 A AC
WINSTON-SALEM 27103 919 768-1270

RITTER, MICHELLE RENEE 034
104-L W. MEADOWS DR. S
WINSTON-SALEM 27103 919 765-7284

RIVERS, RUEBEN NORMAN IM 026
1738 METROMEDICAL DRIVE AC
FAYETTEVILLE 28304 919 323-2503

RIZZUTI, RICHARD PHILIP PS 032
3301 LASSITER ST. A R
DURHAM 27707
ROACH, ROBERT BURCHELL GS 014
PO BOX 1648 A L
LENOIR 28645 704 758-5501
ROARK, GARY LEE 041
1200 N. ELM ST. R
GREENSBORO 27401 919 274-7210
ROBB, JEFFREY WALLACE AN 074
1705 W. 6TH ST. A AC
GREENVILLE 27834 919 752-2140
ROBBINS, JACK GUYES D 032
823 BROAD STREET A AC
DURHAM 27705 919 286-4195
ROBERSON, GEORGE DON OTO /A 060
3535 RANDOLPH RD., STE. 210 AC
CHARLOTTE 28211 704 365-0711
ROBERSON, ROBERT STUART PH 044
305 GRIMBALL DR. A L
HAZELWOOD 28738 704 456-3662
ROBERSON, VIRGIL ODELL, III AN 040
502 LINDSAY ST. A AC
PO BOX 2324
HIGH POINT 27261 919 882-2567
ROBERSON, WILLIAM EARL OBG 065
5305-L WRIGHTSVILLE AVE. A P AC
WILMINGTON 28403 919 791-5556
ROBERTIE, PAUL GERARD AN 034
1832 PINEHURST DR. A AC
CLEMMONS 27012 919 748-4498
ROBERTS, HAROLD ROSS HEM 032
UNC, CB #7035 AC
416 BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-4305
FAX 919 966-7639
ROBERTS, JESSE EARLE RHU /IM 034
1903 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 659-1012
ROBERTS, JOHN MILTON, JR. OBG 082
400 COOPER DRIVE AC
CLINTON 28328 919 592-1414
ROBERTS, JOSEPH E. 034
1809 FALCON TREE CT. #B S
WINSTON-SALEM 27127 919 784-8114
ROBERTS, JOSEPH E., JR. FP 000
RR #2, BOX 161 R
TALIHINA, OK 74571
ROBERTS, KENNETH B. TR /ON 032
511 HUNTER ST. R
DURHAM 27712 919 684-8111
ROBERTS, LEE ANN OBG 092
4420 LAKE BOONE TR., STE. 304 AC
RALEIGH 27607 919 781-2500
ROBERTS, LEROY, JR. DR 026
3130-G TURTLE PT. DR. AC
FAYETTEVILLE 28304 919 323-2012
ROBERTS, LLOYD EUGENE OBG 065
1612 DOCTOR'S CIRCLE A AC
WILMINGTON 28401 919 763-9015
FAX 919 763-1611
ROBERTS, LOUIS CARROLL U 032
3950 PLYMOUTH ROAD A L/RT
DURHAM 27707 919 489-4215
ROBERTS, MARIE PH 032
BOX #7 A L/RT
BAHAMA 27503 919 477-2378
ROBERTS, RICHARD SCOTT AI /PD 036
1050 X-RAY DRIVE, SUITE A AC
GASTONIA 28054 704 861-0515
ROBERTS, ROY FOSTER IM /CD 011
21 GRIFFING BLVD. A L
ASHEVILLE 28804 704 253-6549
ROBERTS, SURRY PARKER RHU /IM 092
120 WOODBURN RD. A RT
RALEIGH 27605 919 828-2245
ROBERTS, THOMAS ADAMS, JR. GE /IM 060
1718 E. 4TH ST., STE. 607 AC
CHARLOTTE 28204 704 372-8750
ROBERTS, WILLIAM STANLEY CD /IM 060
1718 E. 4TH ST., #501 AC
CHARLOTTE 28204 704 347-2024
ROBERTSON, BRISON OAKLEY, III FP 011
N-1 DOCTOR'S DR. AC
ASHEVILLE 28801 704 252-8885

ROBERTSON, CANDACE APPLE 034
315 N. SPRUCE ST. #106 S
WINSTON-SALEM 27101 919 721-0949
ROBERTSON, CARROLL B., III 074
PO BOX 8432 A S
GREENVILLE 27835 919 758-7604
ROBERTSON, HOWARD D. CRS /GS 074
905 JOHNS HOPKINS DR. AC
GREENVILLE 27834 919 758-1747
FAX 919 758-6809
ROBERTSON, JAMES MEBANE GP 049
PO BOX 150 A L
HARMONY 28634 704 546-7587
ROBERTSON, JOSEPH LETCHER,JR. PTH 070
NORTH ROAD ST. A AC
ELIZABETH CITY 27909 919 335-2258
ROBERTSON, KENT ALAN AN /IM 018
415 N. CENTER ST. STE. 103 A AC
HICKORY 28601 704 327-8105
ROBERTSON, LEON WHITFIELD FP /OM 064
107 MEDICAL ARTS MALL * L
ROCKY MOUNT 27804 919 443-8810
ROBERTSON, LLOYD HARVEY, JR. U 080
3035 LEONARD RD. A RT
SALISBIRY 28146 704 633-9441
ROBICSEK, FRANCIS TS /CDS 060
1001 BLYTHE BLVD. #300 A AC
CHARLOTTE 28203 704 373-1500
FAX 704 372-1216
ROBIE, KRISTIN 034
129 N. SUNSET DR. #D-2 S
WINSTON-SALEM 27101 919 722-5367
ROBIE, PETER WILLIAM IM 034
300 S. HAWTHORNE RD. A * AC
WINSTON-SALEM 27103 919 748-2085
ROBIE, WILLIAM ADLAI PD 092
348 BUNCOMBE ST. AC/RT
RALEIGH 27609 919 787-3502
ROBILLARD, ROBERT B. OTO 079
518 S. VAN BUREN RD. AC
EDEN 27288 919 623-7033
ROBINSON, CHARLES HALL, JR. OPH 092
3900 WAKE FOREST RD. STE. 104 A AC
RALEIGH 27609 919 872-3242
ROBINSON, CHARLES WILSON GP 060
8919 PARK RD. CC-3 A L/RT
CHARLOTTE 28210 704 551-7053
ROBINSON, CYNTHIA KAY GS 023
707 W. KING ST. A AC
KINGS MOUNTAIN 28086 704 739-4749
ROBINSON, EDWARD N., JR. ID /IM 041
1200 N. ELM ST. AC
GREENSBORO 27401 919 379-4062
ROBINSON, FRANK ELLIOTT FP 064
PO BOX 7487 AC
ROCKY MOUNT 27804 919 977-6701
ROBINSON, GARY THOMAS GS 049
PO BOX 1821 AC
STATESVILLE 28677 704 878-2011
ROBINSON, GLENN CRANE IM 060
7108 PINEVILLE-MATTHEWS RD. AC
CHARLOTTE 28226 704 542-1952
ROBINSON, JAMES THOMAS, JR. FP 040
1124 E. LEXINGTON AVENUE A AC
HIGH POINT 27262 919 882-1606
ROBINSON, LINDA MOORE FP 043
COATS MEDICAL CLINIC A AC
PO BOX 819
COATS 27521 919 897-6423
ROBINSON, MARK DAVID FP 060
PO BOX 32861 A AC
CAROLINAS MEDICAL CENTER
CHARLOTTE 28232 704 355-3172
ROBINSON, NORMAN JEFFREY CD /IM 065
2131 S. 17TH ST. A AC
PO BOX 9000
WILMINGTON 28402 919 343-0161
ROBINSON, RONALD E. DR 026
1329 ROBESON ST. AC
FAYETTEVILLE 28305 919 323-2012
ROBINSON, SAM GS /TS 023
707 W. KING ST. A AC
KINGS MOUNTAIN 28086 704 739-4749
ROBINSON, STEPHEN CARY NS 041
200 E. NORTHWOOD ST., STE. 312 A AC
GREENSBORO 27401 919 272-4578

ROBISON, WILLIAM PETERSON P 065
114 TARA DR. A AC
WILMINGTON 28409 919 251-6467
ROCAMORA, LEE RUSSELL IM /GE 034
3310 BROOKVIEW HILLS BLVD. A AC
SUITE 201
WINSTON-SALEM 27103 919 725-3591
ROCHMAN, STEPHEN CHARLES U 026
513 OWEN DRIVE A AC
FAYETTEVILLE 28304 919 485-8801
FAX 919 485-5605
ROCKWELL, DAVID ALLEN ORS 096
2701 MEDICAL OFFICE PLACE AC
GOLDSBORO 27534 919 736-2157
FAX 919 580-0424
ROCKWELL, WILLIAM J. K. P 032
DUKE, DEPT. OF PSYCHIATRY AC
DURHAM 27710 919 684-3073
RODDEY, OLIVER FENNELL, JR. PD 060
2711--501 RANDOLPH ROAD A AC
CHARLOTTE 28207 704 374-1736
RODGERS, THEODORE YOUNG, III ORS 083
507 W. COVINGTON STREET A AC
PO BOX 1808
LAURINBURG 28353 919 276-3541
†**RODMAN, CLARK** IM 007
615 E. 12TH STREET L/RT
WASHINGTON 27889 919 946-2101
RODMAN, MICHAEL DAVID IM 092
3100 DURALEIGH RD. AC
RALEIGH 27612 919 881-5996
RODWELL, ELEANOR GP 032
1118 HILLANDALE ROAD A L/RT
DURHAM 27705 919 286-1119
ROE, MATTHEW TODD 032
910 CONSTITUTION DR. APT. 520 S
DURHAM 27705 919 479-8286
ROE, RODNEY ALLEN PTH 023
201 GROVER ST. A AC
SHELBY 28150 704 487-3147
FAX 704 487-3399
ROEMER, CLIFFORD ERIC DR 060
PO BOX 33549 AC
CHARLOTTE 28233 704 371-4056
ROGERS, ANNE THERESA AN 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-4498
ROGERS, BRUCE WILLIAM FP 053
5001 SIMPSON DR. AC
SANFORD 27330 919 775-7531
ROGERS, CHARLES STEWART IM 041
1200 N. ELM STREET AC
GREENSBORO 27401 919 379-4062
ROGERS, DAVID YORK FP /EM 011
115 1/2 MT. CARMETL RD. AC
ASHEVILLE 28806 704 253-3717
ROGERS, GARRETT LEE CD 074
1705 W. 6TH ST., BLDG. E AC
GREENVILLE 27834 919 752-6101
ROGERS, HOBART RAY ORS /HS 081
103 LANE DR. AC
RUTHERFORDTON 28139 704 286-4298
ROGERS, JACK MARRELL P /N 034
BOWMAN GRAY, DEPT. OF PSY. A AC
WINSTON-SALEM 27103 919 748-3617
ROGERS, JAMES MICHAEL PD 034
1355 WESTGATE CENTER DR. AC
WINSTON-SALEM 27103 919 765-8490
FAX 919 765-9741
ROGERS, JIM A D 060
1600 E. FIFTH ST. A AC
CHARLOTTE 28204 704 376-1523
ROGERS, LARRY ARCH NS 060
1010 EDGEHILL ROAD, NORTH A P AC
CHARLOTTE 28207 704 376-1605
ROGERS, MICHAEL SEAN 034
1608-L NORTHWEST BLVD. A S
WINSTON-SALEM 27104 919 777-0334
ROGERS, NOEL BRUCE ORS 067
128 MEMORIAL DRIVE A P * AC
JACKSONVILLE 28540 919 353-4500
ROGERS, ROBERT LEE, JR OBG 014
P. O. BOX 2640 AC
LENOIR 28645 704 758-2309
ROGERS, TATE MOSELEY FP 041
102 POMONA DR. A AC
GREENSBORO 27407 919 299-0000

ROGERS, TED OPH 044
79 PARAGON PARKWAY A AC
CLYDE 28721 704 456-9423

ROHR, MICHAEL S. GS 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4541

ROLLER, JEFFERY EARL EM 074
2612 CROCKETT DR. R
GREENVILLE 27858 919 758-2524

ROLLINS, CHARLES DICK GP 091
507 GRANITE STREET A L
HENDERSON 27536 919 438-7263

ROLLINS, HAL JUDD, JR. OPH 041
348 N. ELM STREET A AC
GREENSBORO 27401 919 274-4626

ROLLINS, ROBERT LEROY, JR. P /FPY 092
2500 WAKE DRIVE A AC
RALEIGH 27608 919 733-9142

ROMEO, BRUCE WALTON IM 045
501 6TH AVE. WEST A AC
HENDERSONVILLE 28739 704 693-3483

ROMEO, BRUNO JOSEPH IM /NM 045
501 SIXTH AVENUE, WEST A L
HENDERSONVILLE 28739 704 693-3483

ROMM, FREDRIC JAY FP /GPM 034
300 S. HAWTHORNE RD. AC
DEPT. OF FAMILY MEDICINE
WINSTON-SALEM 27103 919 748-2229

ROMM, WILLIAM HENRY FP 070
PO BOX 232 L/RT
CURRITUCK 27929 919 232-3387

ROOS, STEVEN DAVID AN 011
7 PARK VIEW DR. EXT. A P AC
ASHEVILLE 28805 704 298-9639

ROPER, GARY WAYNE IM 041
1200 N. ELM ST. R
GREENSBORO 27401 919 929-2340

ROPER, JOHN TRACY ORS 060
2300 HOPEDALE AVE. AC
CHARLOTTE 28207 704 377-4907

ROSE, GRACE WILLETT IM 092
3320 WAKE FOREST RD. AC
RALEIGH 27609 919 872-4850

ROSE, GREGORY C. CD 092
3020 NEW BERN AVE. STE. 520 AC
RALEIGH 27610 919 832-9253

ROSE, JOHN DAVID CD /IM 074
1800 W. 5TH ST., #2 A AC
GREENVILLE 27834 919 752-3185

ROSE, RICHARD PHILLIP ORS 034
FORSYTH MEDICAL PARK, STE. 504 AC
WINSTON-SALEM 27103 919 768-9500

ROSEN, RICHARD JAMES IM /HEM 041
1032 PROFESSIONAL VILLAGE A * AC
GREENSBORO 27401 919 273-9758

ROSEN, ROBERT DEAN FP 034
147 COLUMBINE DRIVE AC
WINSTON-SALEM 27106 919 722-9535

ROSENBERG, ERIC RONALD DR 065
1924 S. LIVE OAK PARKWAY A AC
WILMINGTON 28403 919 762-3882

ROSENBERG, JOEL BENJAMIN IM 011
445 BILTMORE CENTER, STE. 305 A AC
ASHEVILLE 28801 704 253-1482

ROSENBERG, STANLEY JOSEPH AN 041
PO BOX 10373 AC
GREENSBORO 27404 919 379-4092

ROSENFELD, JOEL ALAN U 054
KINSTON UROLOGICAL ASSOCIATES A AC
KINSTON CLINIC NORTH
KINSTON 28501 919 527-3043

ROSENOW, PHILIP JOHN OBG 001
1616 MEMORIAL DR. A AC
BURLINGTON 27215 919 226-8817

ROSS, ALLAN OBG 041
721 GREEN VALLEY RD., STE. 201 A AC
GREENSBORO 27408 919 378-1110

ROSS, ARTHUR J., III PDS
34TH ST. & CIVIC CENTER BLVD. A AC
PHILADELPHIA, PA 19104 215 590-2744
FAX 215 386-4036

ROSS, BABRA AILEEN 032
BOX 2799, DUMC S
DURHAM 27710 919 419-0004

ROSS, CHARLES ALAN FP
603 DOLLEY MADISON RD. R
GREENSBORO 27410 919 294-6190

ROSS, DAVID B. ORS 040
624 QUAKER LN. STE. D-200 P AC
HIGH POINT 27262 919 841-6262

ROSS, DONALD MACCONNELL GS 001
3768 LUTHER CT. A L/RT
BURLINGTON 27215 919 227-3381

ROSS, GARY DEAN
1221 BUCKINGHAM AVE. R
WILMINGTON 28401 919 343-7000

ROSS, JAMES MILLER FP 018
P. O. BOX 490 A AC
CLAREMONT 28610 704 459-7324

ROSS, JOHN MARION OBG 045
630 FIFTH AVENUE, WEST AC
HENDERSONVILLE 28739 704 692-2258

ROSS, OTHO B., JR. IM 060
3022 FERNCLIFF RD. A L/RT
CHARLOTTE 28211 704 366-7820

ROSS, ROBERT MITCHELL AI 034
1401-A OLD MILL CIR. AC
WINSTON-SALEM 27103 919 768-0914

ROSS, THOMAS EDGAR FP 077
P. O. BOX 1827 AC
ROCKINGHAM 28379 919 895-5253

ROSS, WILLIS RICHARD FP 084
320 YADKIN STREET AC
ALBEMARLE 28001 704 982-9144

ROSSER, GEORGE THOMAS R 013
1925 TRILLIUM LANE A AC
CHARLOTTE 28211 704 786-0214

ROSSITCH, EUGENE, JR. 032
3608 COURTLAND DR. A R
DURHAM 27707 617 623-2063

ROSSITCH, JOHN CARLOS R 034
2772 LONDON LANE A R
WINSTON-SALEM 27103 919 748-2471

ROSTAN, STEPHEN EDWIN D /DMP 063
P. O. BOX 669 A * AC
PINEHURST 28374 919 295-5567

ROSTAND, ROBERT ALTON IM /PUD 040
624 QUAKER LN., STE. C-100 AC
HIGH POINT 27262 919 882-7255

ROTH, JONATHAN B. PD /NPM 060
PO BOX 33549 AC
PRESBYTERIAN HOSPITAL
CHARLOTTE 28233 704 371-4944

ROTHMAN, MARK DAVID IM /NEP 092
4021 BARRETT DR. A AC
RALEIGH 27609 919 782-3378

ROTHSTEIN, MANFRED SHELDON D 026
1308 MEDICAL DRIVE A * AC
FAYETTEVILLE 28304 919 323-2227

ROUFAIL, WALTER MICHEL GE /IM 034
1901 S. HAWTHORNE RD., #310 A * AC
WINSTON-SALEM 27103 919 760-4340

ROUNDER, JAMES BURNELL, JR. U 098
1700 S. TARBORO ST. A AC
WILSON 27893 919 399-2251

ROUNDS, JOHN CARSON 060
970 BLACKBERRY CIR. R
CHARLOTTE 28209 704 338-3172

ROUSE, JAMES BRISTOL PD /N 032
2609 N. DUKE ST., STE.801 A AC
DURHAM 27704 919 220-6434

ROUSE, JOHN LAWRENCE, III FP 082
403 FAIRVIEW ST. AC
CLINTON 28328 919 592-6011

ROWE, CHARLES EUGENE, JR. U 040
321 DORADO DR. A P AC
HIGH POINT 27260 919 886-5151

ROWE, CHARLES THOMAS DR 011
DOCTORS BLDG., STE. 103 AC
ASHEVILLE 28801 704 254-4617

ROWE, WILLIAM THOMAS RHU /IM 041
1511 WESTOVER TERRACE AC
GREENSBORO 27408 919 378-1461

ROWLAND, MICHAEL CLARK GS /GE 063
P. O. BOX 2000 A * AC
PINEHURST 28374 919 295-0264
FAX 919 295-5740

ROY, RAYMOND CLYDE AN 034
300 S. HAWTHORNE RD. A AC
DEPT. OF ANESTHESIA
WINSTON-SALEM 27103 919 748-4498
FAX 919 748-4204

ROYAL, BILLY WILLIAMSON P 032
PO BOX 2387 A P * AC
500 EASTOWNE DR., STE. 202
CHAPEL HILL 27516 919 967-9870

ROYAL, DONNIE MARTIN GP 082
BOX 156 A L
SALEMBURG 28385 919 525-4538

ROYAL, MARGIT E. N /IM 065
1515 DOCTORS CIRCLE AC
WILMINGTON 28401 919 763-1219

ROYAL, PHILIP WAYNE 041
1200 N. ELM ST. R
GREENSBORO 27401

ROYSTER, ROGER LEE AN /CC 034
N. C. BAPTIST HOSPITAL AC
WINSTON-SALEM 27103 919 748-2927

ROZAS, LYNDA L. 032
164 SUMMERWALK CIR. A S
CHAPEL HILL 27516

ROZEAR, MARVIN PRICE N 032
BOX 3849, DUKE UNIV. MED. CTR. AC
DURHAM 27710 919 684-8111

ROZIER, JOHN CHARLES, JR. GYN 078
206 W. 27TH STREET A * AC
LUMBERTON 28358 919 739-5550

RUARK, ROBERT JAMES OBG 092
525 WADE AVENUE, APT. #51 A L/RT
RALEIGH 27605 919 832-4722

RUBINO, JOHN IM /A 092
3521 HAWORTH DR. AC
RALEIGH 27609 919 782-1806

RUCKER, TINSLEY WHITE FP 026
1307 AVON ST. AC
FAYETTEVILLE 28304 919 323-1718

RUCKER, WILLIAM L. GS 074
905 JOHN'S HOPKINS DR. A AC
GREENVILLE 27834 919 758-1747

RUDD, EUGENE GREGORY OBG 059
PO BOX 1413 AC
MEDICAL COURT SOUTH
MARION 28752 704 652-3019

RUDD, STEPHEN MILES 074
2462 STANTONSBURG RD. STE. 140 A S
GREENVILLE 27834 919 752-3758

RUDISILL, ELBERT ANDREW, JR. FP 018
133 FIRST AVE., SE AC
HICKORY 28602 704 322-5915

RUEGG, ROBERT G., JR. P /FP 032
JOHN UMSTEAD HOSPITAL R
ADULT ADMISSIONS UNIT
BUTNER 27509 919 575-7099

RUEHLE, STEPHEN SAMUEL IM 040
624 QUAKER LANE A P AC
HIGH POINT 27262 919 841-4233

RUFTY, ALFRED JACKSON, JR. CD /IM 034
BOWMAN GRAY, DEPT. OF MED. AC
WINSTON-SALEM 27103 919 748-4469
FAX 919 748-2273

RUMLEY, RICHARD LEE IM /ID 074
DEPT. OF MEDICINE AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2550

RUNGE, JEFFREY WILLIAM EM 060
CAROLINAS MEDICAL CENTER * AC
PO BOX 32861
CHARLOTTE 28232 704 355-3181

RUPAR, DAVID GERARD PD 060
PO BOX 32861 A AC
CAROLINAS MED. CTR.
CHARLOTTE 28232 704 338-3883

RUPPENTHAL, C. ROBERT, JR. IM /HEM 060
1350 S. KINGS DRIVE AC
CHARLOTTE 28207 704 372-8750
FAX 704 332-7020

RUSH, PAUL F. ORS 083
913 ANGUS DR. AC
LAURINBURG 28352 919 276-4611

RUSKIN, JEROME CD 041
301 E. WENDOVER AVE., STE. 200 A AC
GREENSBORO 27401 919 274-3241

RUSS, DONALD BARNARD P 012
RT. #10, BOX 200-H A AC
MORGANTON 28655 704 438-6230

RUSS, DONALD JAMES IM 060
3535 RANDOLPH ROAD A AC
CHARLOTTE 28211 704 365-0760
FAX 704 364-1641

RUSSELL, DONALD WAYNE IM /AI 011
210 ASHELAND AVE. A AC
ASHEVILLE 28801 704 253-3382

RUSSELL, DOUGLAS MACARTHUR GS 096
304 GLEN OAK DRIVE AC
GOLDSBORO 27530 919 734-5010

RUSSELL, EUGENE FAIRCHILD,III OBG 041
510 N. ELAM AVE., STE. 101 A AC
GREENSBORO 27403 919 273-2563

RUSSELL, HENRY EDWIN GS 032
3116 N. DUKE ST. AC
DURHAM 27704 919 479-6312
FAX 919 479-6206

RUSSELL, JEFFREY KENT DIA /END 011
445 BILTMORE CENTER, STE. 302 AC
ASHEVILLE 28801 704 253-6812

RUSSELL, JOHN HUNTER CD 011
BOX 7239 AC
ASHEVILLE 28802 704 254-8054
FAX 704 252-0579

RUSSELL, JOSEPH DWIGHT IM /NEP 098
1700 S. TARBORO ST. A AC
WILSON 27893 919 291-1300

RUSSELL, PHILIP EVERITT IM /PUD 011
204 DOCTOR'S BUILDING L/RT
ASHEVILLE 28801 704 274-3560

RUSSELL, ROGER BIVINS PS /GS 092
4301 LAKE BOONE TR., STE. 205 AC
RALEIGH 27607 919 881-0077
FAX 919 881-9662

RUSSELL, WILLIAM MICHAEL R /NM 070
P. O. BOX 250 AC
ELIZABETH CITY 27909 919 335-0531

RUSSELL, WILSON GLOVER PTH 034
FORSYTH MEM HOSP-PTH A P AC
WINSTON-SALEM 27103 919 773-3840

RUST, CARL KING, II GE /IM 065
1202 MEDICAL CENTER DR. A P * AC
WILMINGTON 28401 919 341-3300

RUTH, WAYNE K. PUD /IM 001
1214 VAUGHN RD. STE. A P AC
BURLINGTON 27217 919 229-4441
FAX 919 229-0846

RUTHERFORD, EDMUND GS /CC
1201 AMBERWOOD CR. R
NASHVILLE, TN 37221

RUTLEDGE, MARY LOUISE PD 060
2157 NORTON ROAD A L/RT
CHARLOTTE 28207 704 334-9218

RUTLEDGE, ROBERT GS /CC 032
UNC, DEPT. OF SURGERY A AC
CAMPUS BOX 7050
CHAPEL HILL 27599 919 962-7555

RYAN, W. JAMES,II P 001
723 EDITH STREET AC
BURLINGTON 27215 919 227-0126

RYAN, WILLIAM SCOTT PD 078
103 W. 27TH ST. AC
LUMBERTON 28358 919 739-3318

RYBURN, SAMUEL BENJAMIN PD 098
WILSON CLINIC A AC
WILSON 27893 919 399-2409

SAAD, MAGED HANNA P /GP 092
3010 FALSTAFF ROAD AC
RALEIGH 27610 919 821-3101

SABISTON, DAVID COSTON, JR. GS /TS 032
DUKE UNIV. MED. CTR. A AC
DURHAM 27710 919 684-2831

SABISTON, FRANK, JR. GS /TS 054
KINSTON CLINIC, NORTH A * AC
BOX 1316
KINSTON 28501 919 522-1626

SABISTON, WALTER ROBERTS OTO 054
KINSTON CLINIC,NORTH, STE. K AC
KINSTON 28501 919 523-0687

SACCO, RUSSELL JOHN IM /GER 045
506 PARK HILL COURT * AC
HENDERSONVILLE 28739 704 692-3538

SACCO, SARA E. N 060
MECKLENBURG NEURO. ASSOC A AC
1900 RANDOLPH RD., STE. 1010
CHARLOTTE 28207 704 334-7311

SACRINTY, NICHOLAS WILLIAM IM /GE 079
608 LINDEN DR. AC
EDEN 27288 919 623-9794

SADLER, NATALIE JONES P 032
UNC, DEPT. OF PSYCHIATRY R
CHAPEL HILL 27599 919 966-5711

SAENGER, PAUL JAY ORS 011
129 MCDOWELL ST. AC
ASHEVILLE 28801 704 258-8800

SAGBERG, ANNE ELISABETH P 011
343 BARNARD AVENUE A L/RT
ASHEVILLE 28804 704 254-3201

SAHBA, MEHRDAD MAJDZADEH GE /IM 032
PO BOX 16999 A AC
4205 BEN FRANKLIN BLVD.
DURHAM 27704 919 682-5561

SAILER, SCOTT L. RO 032
NCMH, DEPT. OF RADIATION ONC. AC
CHAPEL HILL 27599 919 966-7700
FAX 919 966-7681

SALAZAR, JORGE E. IM 041
2333 BRICKELL AVE. #2717 R
MIAMI, FL 33129

SALDANHA, CHRISTALENE 074
334 LINDSAY DR. APT. 5-H A S
GREENVILLE 27834 919 355-3167

SALEEBY, RICHARD GEORGE CRS 092
3801 COMPUTER DRIVE L
RALEIGH 27609 919 787-2542

SALIBA, CONSTANTIN GS 026
3318 MELROSE ROAD A AC
FAYETTEVILLE 28304 919 323-0280

SALISBURY, JAMES ARTHUR OPH 012
503 W. UNION ST. AC
MORGANTON 28655 704 433-6220

SALISBURY, KENT WILLIAM CD /IM 011
PO BOX 7239 A AC
ASHEVILLE 28802 704 254-8054

SALLE, GEORGE FREDERIC U 074
1703 W. SIXTH STREET A L
GREENVILLE 27834 919 752-2507

SALLEE, D. SKIP DR 032
7070 CLAUGHTON ISLAND DR.#1616A R
MIAMI, FL 33131 305 530-1973

SALMON, ROBERT BRUCE R 060
CHARLOTTE RADIOLOGY A AC
PO BOX 36937
CHARLOTTE 28236 704 355-2274

SALTER, TERESA PALMER PD 092
101 W. DURHAM ROAD AC
CARY 27513 919 467-5543

SALTON, RUSSELL ARTHUR,III FP 060
1515 MOCKINGBIRD LN. #312 AC
CHARLOTTE 28209 704 333-5447

SALTZMAN, HERBERT AARON PUD /A 032
BOX 3838, DUMC A AC
DURHAM 27710 919 684-4149
FAX 919 684-8666

SALVAGGIO, MARK ANTHONY GS /VS 090
900-A E. SUNSET DR. A AC
MONROE 28112 704 289-2561

SALZBERG, LENARD DAVID
1601-B OWEN DR. A R
FAYETTEVILLE 28304

SAMPSON, JOSEPH LUTHER, JR. PS /GS 065
1902 TRADD CT., HOSP. PLAZA A AC
WILMINGTON 28401 919 343-9774

SAMUELS, WALTER RAY OBG 060
150 PROVIDENCE ROAD A AC
CHARLOTTE 28207 704 377-0461

SANCHEZ, ALEXANDER F.,JR. FP/OM 060
SPRINGS INDUSTRIES * AC
PO BOX 70
FORT MILL, SC 29715 803 547-3970

SANCHEZ, CLARE JEANNE GER /IM 092
DOROTHEA DIX HOSPITAL * AC
MEDICAL SURG. DIV. DIRECTOR
RALEIGH 27611 919 733-5431

SANCHEZ, RAFAEL CAMILO FP /ADL 074
PO BOX 20035 A AS
GREENVILLE 27858 919 551-2600

SANDBORN, WILLIAM DEAL GS 045
P. O. BOX 5400 AC
FLETCHER 28732 704 687-1418

SANDERFORD, JAMES LYON, JR. DR /NM 034
3155 MAPLEWOOD AVENUE A AC
WINSTON-SALEM 27103 919 760-5876

SANDERS, FOSTER J., JR. PTH 060
200 HAWTHORNE LN. A AC
CHARLOTTE 28204 704 384-4814

SANDERS, JAMES ALLEN ORS 036
902 COX RD. A AC
GASTONIA 28052 704 867-2333

SANDERS, JAMES HENRY, JR. FP /GER 088
BLD #1, MEDICAL PARK DR. A AC
BREVARD 28712 704 884-9362

SANDERS, LEE HYMAN PD 092
2502 ANDERSON DRIVE L/RT
RALEIGH 27608 919 787-9888

SANDERS, STEPHEN BRIAN P 040
3315 KETTERING PL. AC
GREENSBORO 27410 919 841-7772

SANDERSON, WM. EARL FP 026
2175 VILLAGE DR. AC
FAYETTEVILLE 28305 919 483-7565

SANDLER, ROBERT SAMUEL GE 032
UNC, CB #7080 AC
423 BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-2511

SANDRIDGE, DAVID ALLEN OBG 011
50 DOCTORS DR. #120 W.ANNEX A AC
ASHEVILLE 28801 704 255-8900

SANDY, ROBERT EUGENE R 007
630 E. 11TH ST. A AC
WASHINGTON 27889 919 946-2137

SANFILIPPO, ALFRED PAUL PTH /IG 032
3315 STONEYBROOK DRIVE AC
DURHAM 27705 919 684-2482
FAX 919 688-2039

SANFORD, VIRGINIA OATES GP /PD 096
811 SIMMONS ST. AC
PO BOX 146
GOLDSBORO 27530 919 734-8242

SANG, CHARLIE JOSEPH, JR. PD /PDC 074
ECU SCHOOL OF MEDICINE A AC
DEPT. OF PED,DIV. PED CARD
GREENVILLE 27858 919 551-5601
FAX 919 551-5561

SANKAR, SEEPLAPUTHUR G. GS /VS 001
1624 MEMORIAL DR. A AC
BURLINGTON 27215 919 229-6428

SANSING, MARY TINSLEY OBG 040
400 N. ELM ST. A AC
HIGH POINT 27260 919 889-4353

SANTIAGO, MANUEL ANTONIO IM 032
BOX 3281, DUMC R
DURHAM 27710 919 684-8111

SANTORIELLO, KATHY ANN OBG 026
3613 CAPE CENTER DR. AC
FAYETTEVILLE 28304 919 483-6677

SANTOS, CESAR CRUZ PD /CHN 032
BOX 3533, DUMC R
DURHAM 27710 919 684-3219

SANTOSO, RUDY ADRIAN N /P 018
1019 LENOIR RHYNE BLVD. AC
HICKORY 28602 704 324-4143

SAPPENFIELD, DAVID LUTHER OPH 032
MCPHERSON HOSPITAL A P * AC
1110 W. MAIN ST.
DURHAM 27701 919 682-9341

SAPPENFIELD, LUTHER COOK, JR. OPH 026
1629 OWEN DRIVE * AC
FAYETTEVILLE 28304 919 484-6141

SARAZEN, PAUL MARK, JR. PD 023
101 GROVER STREET A S/RT
SHELBY 28150 704 482-1435

SARDI, CARL ANTHONY OTO /A 041
7100 BETHLEHEM CHURCH RD. L/RT
CLIMAX 27233 919 674-2509

SARGENT, WINSTON ARTHUR Y. GP 061
37 SUMMIT ST. A L/RT
BURNSVILLE 28714

SARMINA, IGNACIO U 032
923 BROAD ST. AC
DURHAM 27705 919 286-1297
FAX 919 286-7599

SARTIANO, GEORGE P. ON 074
ECU SCHOOL OF MED. AC
GREENVILLE 27858 919 551-3419

SARTOR, R. BALFOUR GE /IM 032
UNC CB 7080 AC
BURNETT-WOMACK BLDG
CHAPEL HILL 27599 919 966-2511

SASSER, PATRICK HENRY GP 096
100 E. LOCKHAVEN DRIVE A AC
GOLDSBORO 27534 919 734-2924

SASSER, PAUL WM. FP 079
520 S. VAN BUREN RD. A AC
EDEN 27288 919 623-5171

SATHER, RANDALL KENNETH R 032
3101 PETTY RD., STE. 1401 A AC
DURHAM 27707 919 383-9407

SATO, TAKAO LEWIS IM /GE 034
6730 AMBERLEY LN. R
CLEMMONS 27012 919 766-9505

SATTERFIELD, BENTON SAPP OBG 092
3126 BLUE RIDGE RD. A AC
RALEIGH 27612 919 782-3865

SATTERFIELD, G. HOWARD, JR. OBG 074
DOCTOR'S PARK, BUILDING #5 AC
GREENVILLE 27834 919 758-5246

SATTERFIELD, JAMISON JEROME PD 060
2711 RANDOLPH RD., STE. 301 AC
CHARLOTTE 28207 704 332-6332

SATTERLY, ROBERT ALAN OTO 098
WILSON CLINIC A AC
WILSON 27893 919 291-7001

SATTERWHITE, WILLIAM M. OTO /HNS 034
1420 PLAZA DRIVE AC
WINSTON-SALEM 27103 919 765-4922

SATTLER, RAYMOND LOUIS NS 065
1602 DOCTORS CIRCLE A AC
WILMINGTON 28401 919 762-3111
FAX 919 251-1886

SAUNDERS, ANDREW PETER ORS 012
DOCTORS' CLINIC AC
VALDESE GENERAL HOSPITAL
VALDESE 28690 704 874-3379

SAUNDERS, CHARLES LAWRENCE,JR. GYN 001
523 WILDWOOD LN. A L/RT
BURLINGTON 27215 919 227-9116

SAUNDERS, JAMES E. 032
1413 BROAD ST. R
DURHAM 27705 919 684-8111

SAUNDERS, JAY FRED FP 008
BOX 309 AC
AULANDER 27805 919 345-3791

SAUNDERS, TIMOTHY GRAY OPH 060
1600 E. THIRD ST. AC
CHARLOTTE 28204 704 358-4111
FAX 704 358-4157

SAUNDERS, WADE HAMPTON,III CD 011
PO BOX 7239 AC
ASHEVILLE 28802 704 254-8054

SAUTER, SUZANNE VAN HOUTEN RHU /IM 032
UNC, TRAILER 33, CB #7200 AC
CHAPEL HILL 27599 919 966-5164

SAVARESE, CHARLES JOSEPH, JR. FP /CD 010
P. O. BOX 1948 A
SHALLOTTE 28459 919 754-8105

SAVIDGE, THOMAS OLIVER IM /CD 010
906 N. ATLANTIC AVE. AC
SOUTHPORT 28461

SAWYER, BARBARA ANN 074
BIRCHWOOD SANDS MOBILE HOME S
ESTATES, LOT #28
GREENVILLE 27834 919 758-3155

SAWYER, CHARLES GLENN CD /IM 034
905 GOODWOOD ROAD A L/RT
WINSTON-SALEM 27106 919 748-4462

SAWYER, CHARLES JUDSON, III FP 008
MEDICAL ARTS CTR., ACADEMY ST. AC
AHOSKIE 27910 919 332-3548

SAWYER, JOHN WILSON IM 041
609 WALTER REED DRIVE AC
GREENSBORO 27403 919 299-2815

SAWYER, THOMAS R. OPH 063
PO BOX 2445 AC
PINEHURST 28374 919 295-2100

SAWYER, TIMOTHY T. D 001
1522 VAUGHN RD. A AC
BURLINGTON 27217 919 229-5100

SAXE, JESSICA SCHORR FP 060
910 N. ALEXANDER AC
CHARLOTTE 28206 704 355-3084

SAYERS, DANIEL GARVIN EM 034
2804 MONTCLAIR ROAD A * AC
WINSTON-SALEM 27106 919 725-3304

SAYERS, WILLIAM FLOYD PD 034
3318 HEALY DRIVE AC
WINSTON-SALEM 27103 919 765-8490
FAX 919 765-9741

SCANLAN, JAMES GEORGE CD /IM 092
2800 BLUE RIDGE BLVD., #301 AC
REX MEDICAL OFFICE BLDG.
RALEIGH 27607 919 881-0160
FAX 919 881-0887

SCARANTINO, CHARLES WALTER TR 092
4420 LAKE BOONE TR. A AC
REX CANCER CTR.
RALEIGH 27607 919 783-3018
FAX 919 781-7192

SCARBOROUGH, DAWSON EMERSON PTH 092
WAKE CO. MED. CTR.,-PATH. A AC
RALEIGH 27610 919 755-8260

SCARBOROUGH, WALTER AVERY, JR. P 092
1004 DRESSER COURT, STE. 101 AC
RALEIGH 27609 919 876-0090

SCARFF, JOHN EDWIN, JR. U /GS 082
603 BEAMAN ST. AC
CLINTON 28328 919 592-7129

SCARLATA, SALVATORE AN 060
2825 RANDOLPH RD. AC
CHARLOTTE 28211 704 541-7218

SCATLIFF, JAMES HOWARD R 032
NC MEMORIAL HOSP., CB 7510 A AC
DEPT. OF RADIOLOGY
CHAPEL HILL 27599 919 966-4238

SCHAAF, ROBERT EDMUND DR 092
WAKE RADIOLOGY CONSULTANT A AC
P. O. BOX 19366
RALEIGH 27619 919 787-8199

SCHAAL, JENNIFER C. GYN 041
1507 WESTOVER TERR., STE. C A AC
GREENSBORO 27408 919 273-3661

SCHAFERMEYER, ROBERT WM. EM /PD 060
CAROLINAS MEDICAL CENTER A AC
P. O. BOX 32861
CHARLOTTE 28232 704 355-3181

SCHALL, STEWART ALLAN PDC /PD 041
1200 N. ELM ST. AC
MOSES CONE MEM. HOSP.
GREENSBORO 27401 919 379-4060
FAX 919 379-3591

SCHANBERG, LAURA EVE PD /RHU 032
3402 BONAPARTE WAY R
DURHAM 27707 919 684-4433

SCHARF, FORREST LARRY CLP /HEM 001
1020 BROOKVIEW DR. A C
ELON COLLEGE 27244 800 334-5161

SCHECTER, NANCY POST N 092
3320 EXECUTIVE DRIVE A P AC
RALEIGH 27609 919 872-0940

SCHEIBNER, STEPHEN BALL D 049
STATESVILLE MEDICAL GROUP AC
PO BOX 1821
STATESVILLE 28677 704 878-2011

SCHEIL, CHARLES PHILIP FP 014
P. O. BOX 960 AC
LENOIR 28645 704 754-0541

SCHERER, IRVIN GEORGE FP 049
PO BOX 10 AC
UNION GROVE 28689 704 539-4731

SCHERTZINGER, HOWARD J. 032
3805-202 CHIMNEY RIDGE PL. R
DURHAM 27713 919 684-8111

SCHIEBEL, HERMAN MAX GS /TS 032
1020 ANDERSON ST. A L
DURHAM 27705 919 489-5109

SCHILLER, HERBERT MILES PTH /CLP 034
2570 EMPIRE DR. AC
WINSTON-SALEM 27103 919 760-4620
FAX 919 760-4098

SCHIMIZZI, GREGORY F. RHU /IM 065
1202 MEDICAL CENTER DR. AC
WILMINGTON 28401 919 341-3300
FAX 919 341-3419

SCHKOLNE, BENZION AN 034
300 BEECHCLIFF COURT AC
WINSTON-SALEM 27104 919 765-9091

SCHLASEMAN, GUY W. R 032
3437 RUGBY RD. L/RT
DURHAM 27707

SCHMID, HERMAN ERNEST, JR. FP /GER 034
720 TAM-O-SHANTER TR. AC
WINSTON-SALEM 27103 919 765-4007

SCHMID, JOSEF FRANCIS, III 034
1902 QUEEN ST., APT. D-4 S
WINSTON-SALEM 27103 919 748-8925

SCHMIDT, EVELYN PD /PH 032
1301 FAYETTEVILLE STREET A * AC
DURHAM 27707 919 683-1316
FAX 919 687-4257

SCHMIDT, JEFFREY JAY N 041
1305 W. WENDOVER AVE. A AC
GREENSBORO 27408 919 275-0779

SCHMITT, JOHN WILSON OBG 092
4420 LAKE BOONE TR., STE. 303 AC
RALEIGH 27607 919 781-5510

SCHMITT, PHILIP JULIAN P /CHP 018
PO BOX 9149 * AC
HICKORY 28603 704 327-7888

SCHMITT, RAYMOND FRANCIS, JR. CHP /P 039
JOHN UMSTEAD HOSP. A AC
ADOLESCENT UNIT, C.P.I.
BUTNER 27509 919 575-7906

SCHMITTER, KARL JOSEPH GS /HNS 036
902 COX RD., STE. C A AC
GASTONIA 28054 704 864-7821

SCHNEIDER, INAAM J. IM 018
PO BOX 1710 AC
HICKORY 28603 704 328-5566

SCHNEIDER, RICHARD J. IM 018
PO BOX 1710 AC
HICKORY 28603 704 328-5566

SCHNEIDER, ROBERT E. EM /U 060
2001 CLEMATIS DR. * AC
CHARLOTTE 28211 704 355-3181

SCHNELL, EDWARD WALTER OPH 063
1902-D N. SANDHILLS BLVD. AC
ABERDEEN 28315 919 692-4468

SCHNIDER, STUART LEE EM 001
PO BOX 464 A AC
BURLINGTON 27215 919 222-1634

SCHNOOR, MELANIE MAE 032
601 JONES FERRY RD., APT. D-5 S
CARRBORO 27510 919 932-9086

SCHOLL, GEORGE KENNETH, JR. U 060
1012 KINGS DR., STE. 806 AC
CHARLOTTE 28283 704 334-6449

SCHOLZ, DAVID GEORGE IM /GE 060
125 BALDWIN AVE. A AC
CHARLOTTE 28204 704 338-6300

SCHREITER, STEVEN WALTER 034
928 MAR DON HILLS R
WINSTON-SALEM 27104 919 748-2011

SCHROEDER, KARL VINCENT P 011
61 FAIRCREST RD. AC
ASHEVILLE 28804 704 253-3681

SCHROETER, THOMAS ANTHONY 032
2 CHIMNEY TOP COURT A R
DURHAM 27705 919 489-5920

SCHUG, JOHN BUTLER GYN 060
1718 E. 4TH ST., #907 A AC
CHARLOTTE 28204 704 364-1041

SCHULHOF, LARY ALAN NS 011
7 MCDOWELL STREET A AC
ASHEVILLE 28801 704 255-7776

SCHULTEN, HERBERT JOHN ORS 018
912 SECOND ST. NE A AC
HICKORY 28601 704 324-2800

SCHULTZ, JOHN LOESCH DR /NM 034
325 FAIRFAX DR. A C
WINSTON-SALEM 27104 919 659-8665

SCHUMACHER, DONALD IM 060
335 N. CASWELL ROAD A AC
CHARLOTTE 28204 704 376-4852

SCHUMACK, EDWARD JAMES FP /P 092
PO BOX 16125 A RT
RALEIGH 27610 919 828-6019

SCHUPBACH, CURTIS WAYNE D 060
2620 E. 7TH ST. AC
CHARLOTTE 28204 704 358-9900

SCHUST, RENEE THERESE 032
625 WINDSONG LN. A R
DURHAM 27713 919 966-4131

SCHUSTER, STEPHEN BARBER AN 041
1816 PEMBROKE RD., STE. #2 A AC
GREENSBORO 27408 919 272-3720

SCHUTTE, HAROLD DELANO PD 011
53 S. FRENCH BROAD AVE. A AC
ASHEVILLE 28801 704 258-0969

SCHWARTZ, EARL EM 034
BOWMAN GRAY-EMERG. MED. A * AC
WINSTON-SALEM 27103 919 748-4625
FAX 919 748-5438

SCHWARTZ, JARED NAPHTALI PTH 060
P. O. BOX 33549 A AC
CHARLOTTE 28233 704 384-4814

SCHWARTZ, ROBERT PAUL PD /PDE 060
CAROLINAS MEDICAL CENTER A * AC
P. O. BOX 32861
CHARLOTTE 28232 704 355-3156
FAX 704 355-3116

SCHWARZ, RONALD PAUL GE /IM 092
3521 HAWORTH DR. AC
RALEIGH 27609 919 782-1806

SCHWEIZER, DONALD CONRAD GYN 065
1009 BAY HEAD CIRCLE A L
WILMINGTON 28405 919 379-8460

SCHWILM, ARLEN LEE D 060
3535 RANDOLPH ROAD, SUITE 101 A AC
CHARLOTTE 28211 704 364-6110

SCHWINN, DEBRA ANNE AN 032
BOX 3094, DUMC AC
DURHAM 27710 919 681-4774

SCOBEY, MARTIN WM. IM /GE 034
300 S. HAWTHORNE RD. C
WINSTON-SALEM 27103 919 748-4612

SCONTSAS, GEORGE JOHN N 054
1607 WINDSOR RD. A P AC
KINSTON 28501 919 523-5524

SCOTT-HARRIS, DIANNE L. AN 032
BOX 3094, DUMC A AC
DURHAM 27710 919 684-3239

SCOTT, ALAN FULTON FP 080
P. O. BOX 63 A L/RT
SALISBURY 28144 704 636-5431

SCOTT, CHARLES KIMREY PD /ADL 001
530 W. WEBB AVENUE * AC
BURLINGTON 27215 919 228-8316

SCOTT, CHARLES MATTHEW GS /VS 065
1501 MEDICAL CENTER DR. AC
WILMINGTON 28401 919 763-6289

SCOTT, CORIDALIA WALD PTH 041
5400 CENTURY OAKS DR. A AC
GREENSBORO 27405 919 854-6455

SCOTT, DEBORAH ANNETTE PD 060
5600 ALBEMARLE RD. STE. 800 AC
CHARLOTTE 28227 704 376-0884

SCOTT, DON JOE EM 012
RT. #8, BOX 313 AC
MORGANTON 28655 704 438-2232

SCOTT, HARRY WHITE D 092
3900 BROWNING PL.,STE. 202 * AC
RALEIGH 27609 919 782-2735

SCOTT, JACKSON VANCE FP /IM 036
101 W. CATAWBA AVENUE A AC
MOUNT HOLLY 28120 704 827-3014

SCOTT, JOHN LAYNE DR /NM 041
5400 CENTURY OAKS DR. A AC
GREENSBORO 27405 919 854-6868

SCOTT, LEGRAND THURMAN, JR. FP 077
1102 CAROLINA DRIVE RT
ROCKINGHAM 28379 919 895-9901

SCOTT, LINCOLN BAIN ADL 032
UNC STUDENT HEALTH SERVICE AC
CHAPEL HILL 27599

SCOTT, SAMUEL EDWIN FP 001
5270 UNION RIDGE RD. A AC
BURLINGTON 27217 919 421-3247

SCOTT, SARA MARIE 074
RT. #8, BOX 329-7 A S
GREENVILLE 27834 919 830-4875

SCOTT, STEVEN MARTIN OBG /EM 032
3711 STONEYBROOK DR. A AC
DURHAM 27705 919 383-0355

SCOVIL, JAMES A., JR. CD /IM 092
3020 NEW BERN AVE. STE. 440 AC
RALEIGH 27610 919 856-1941

SCUDERI, PHILLIP EDWARD AN /CC 034
1728 BUENA VISTA RD. A AC
WINSTON-SALEM 27104 919 748-4297

SCULLY, KEVIN SLEAN ORS 065
1616 MEDICAL CENTER DR. AC
WILMINGTON 28401 919 762-2655

SEAGLE, LEE MARCUS, JR. FP 018
133 FIRST AVENUE, S.E. AC
HICKORY 28602 704 322-5915

SEAL, STEPHEN RANDAL OTO 011
131 MCDOWELL A AC
ASHEVILLE 28801 704 254-3517

SEALY, WILL CAMP TS /CDS 032
777 HEMLOCK ST., BOX 6000 A L
MACON, GA 31208 912 744-1000

SEARS, RICHARD JOHN 034
3556 HEATHROW DR. A S
WINSTON-SALEM 27127 919 785-4520

SEARS, VICTOR W., JR. 034
3556 HEATHROW DR. A R
WINSTON-SALEM 27127 919 748-2011

SEATON, ANTHONY DEAN 034
1113 LOBLOLLY COURT S
LEWISVILLE 27023 919 945-2234

SEATON, KAREN GIPSON DR 032
59 POLKS LANDING R
CHAPEL HILL 27516 919 933-9515

SEAY, HILLIS LEDBETTER GP 060
PO BOX 528 A * L/RT
HUNTERSVILLE 28078 704 875-6946

SECOSAN, CRAIG JOHN OPH 088
#2 MEDICAL PARK DR. A AC
BREVARD 28712 704 884-7320

SECREST, ALVIN JACKSON, JR. U 023
1001 N. WASHINGTON STREET A AC
SHELBY 28150 704 482-2011

SECRIST, RANDY D. R 092
4623 WOODRIDGE C
RALEIGH 27612 919 738-8222

SEDDON, JENNIFER L. FP 043
ROUTE #4, BOX 630 AC
DUNN 28334 919 892-2103

SEDDON, JOHN MICHAEL U 043
714 TILGHMAN DR. A AC
DUNN 28334 919 892-1068

SEDWITZ, JOSEPH LEE GS /GYN 092
231 HOSPITAL ROAD * AC
ZEBULON 27597 919 269-9310

SEEAR, TORBEN GYN 036
938 PARAMOUNT CIRCLE A L/RT
GASTONIA 28052 704 864-7935

SEELY, THOMAS J. P 041
606 WALTER REED DR. AC
GREENSBORO 27403 919 299-5400

SEHGAL, NARINDER NATH OBG 074
DEPT. OF OB-GYN AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4622

SEHGAL, PRAGNA NINA FP /GER 074
DEPT. OF FAMILY MEDICINE A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2189

SEIBEL, KATHLEEN MARIE P 032
300 EASTOWNE, STE. 215 AC
CHAPEL HILL 27514 919 493-1466

SEIDEL, MURRAY KAYE ORS 065
1222 MEDICAL CENTER DRIVE A P AC
WILMINGTON 28401 919 763-2977

SEIGLER, HILLIARD FOSTER GS 032
BOX 3966, DUMC A AC
DURHAM 27710 919 684-3942
FAX 919 684-8666

SEIGMAN, EDWIN LINCOLN DR 064
105 BUNN DRIVE L/RT
ROCKY MOUNT 27804 919 443-2044

SELF, CRAIG STEPHEN 074
APT. P-3, DOCTORS PARK A S
BEASLEY DR.
GREENVILLE 27834 919 757-3001

SELF, JERRY LEE DR 081
217 WEST 2ND ST. A AC
RUTHERFORDTON 28139 704 287-2984

SELLE, JAY GREGORY TS /CDS 060
1001 BLYTHE BLVD. #300 A AC
CHARLOTTE 28203 704 373-1500

SELLERS, BOBBY EUGENE P 092
3900 BROWNING PLACE AC
RALEIGH 27609 919 787-7125

SELLERS, FRANK BARKLEY ORS 013
PO BOX 1606 A AC
CONCORD 27026 704 788-3155
FAX 704 788-3487

SELLERS, GLADSTONE A. IM 091
542 W. RIDGEWAY ST. AC
WARRENTON 27589 919 257-3141

SELLERS, PHILLIP ALAN IM 045
510 7TH AVENUE, WEST A P * AC
HENDERSONVILLE 28739 704 692-2231

SELMAN, RICHARD DAVID P /ALD 011
HIGHLAND HOSPITAL A AC
P. O. BOX 1101
ASHEVILLE 28802 704 254-3201

SELSOR, LINDA CAROL D 060
3535 RANDOLPH RD. A AC
101 WENDOVER BLDG.
CHARLOTTE 28211 704 364-6110

SELTZER, STEPHEN CHARLES FP 084
320 YADKIN ST. AC
ALBEMARLE 28001 704 982-9144

SEMAN, LEO JOHN, JR. 034
36 MARY LOU ST. R
METHUEN, MA 01844

SEMANS, JAMES HUSTEAD U 032
DUKE UNIV. MED. CTR. A L
DURHAM 27710 919 684-2744

SENA, ARLENE C. 032
201 HOWELL ST., APT. 4B S
CHAPEL HILL 27514

SENTER, WILLIAM JEFFRESS IM 092
704 W. JONES STREET A L
RALEIGH 27603 919 832-5125

SERAFIN, DONALD PS /GS 032
DUMC-PLASTIC SURGERY A AC
DURHAM 27710 919 684-3347

SERANO, RICHARD D. 026
1289 OLIVER ST. A P C
FAYETTEVILLE 28304 919 483-9200

SERENE, JAMES WILLIAM ORS 049
141 N. KELLY STREET A P AC
STATESVILLE 28677 704 872-7492

SERENE, MARY BRUCE MCKENZIE AN 049
141 N. KELLY STREET A P AC
STATESVILLE 28677 704 873-5661

SERFAS, DAVID HILL CD 011
PO BOX 7239 AC
ASHEVILLE 28802 704 254-8054

SERVOSS, RONALD LEE AN 050
P. O. BOX 984 A P AC
SYLVA 28779 704 586-8081

SESSIONS, JOHN TURNER, JR. GE /IM 032
UNC,324 CLINICAL SCI. 229-H AC
CHAPEL HILL 27599 919 966-2511
FAX 919 966-7592

SESSIONS, RICK PAUL 032
210 WESTBROOK DR. R
CARRBORO 27510 919 933-5880

SETHI, SHASHI K. OPH 041
1021 E. WENDOVER AVE., STE.101 AC
GREENSBORO 27405 919 273-7813

SEVERN, HENRY DOELLER ORS 011
4 PINE TREE RD. A L/RT
ASHEVILLE 28804 704 252-9948

SEVIER, ROBERT ENGLISH END /IM 041
510 N. ELAM AVE. STE, 201 A AC
GREENSBORO 27403 919 299-5454

SGAMBATI, MARIA 034
1106 MELROSE ST. A S
WINSTON-SALEM 27103 919 721-0489

SHABAN, STEPHEN FRANCIS U 032
109 CONNER DR. STE. 2104 A * AC
CHAPEL HILL 27514 919 968-4656

SHACKELFORD, DONALD P., JR. 034
BOX 284, BOWMAN GRAY A S
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 725-8605

SHACKELFORD, ERNEST D.,JR. DR /NM 076
P. O. BOX 427 AC
ASHEBORO 27204 919 629-0774

SHACKELFORD, JOSEPH ROY, III FP 032
NCMH MANNING DR. A RT
DEPT. OF FAMILY PRACTICE
CHAPEL HILL 27599 919 968-9574

SHACKELFORD, ROBERT HILLIARD FP 096
238 SMITH CHAPEL ROAD AC
MOUNT OLIVE 28365 919 658-4954

SHADDUCK, PHILLIP PRICE GS 032
DUMC, BOX 31145 R
DEPT. OF SURGERY
DURHAM 27710 919 684-8111

SHAFER, DONALD THORNTON AN 041
5 MONMOUTH COURT A AC
GREENSBORO 27410 919 373-8555

SHAFER, FRANK TYACK IM 080
P. O. BOX 2129 * AC
SALISBURY 28144 704 636-1826

SHAFER, IRVING EVERETT, JR. R 049
PO BOX 2449 L/RT
SALISBURY 28145 704 873-5661

SHAFFNER, LOUIS DES PDS /GS 034
740 N. PINE VALLEY ROAD A P * L/RT
WINSTON-SALEM 27106 919 725-1503

SHAFFNER, SUSAN CASPER PD 060
1700 ABBEY PL. A AC
CHARLOTTE 28209 704 332-7539

SHAH-KHAN, SARDAR MAHMOOD IM /CD 012
303 COLLEGE STREET * AC
MORGANTON 28655 704 437-4261

SHAH, JYOTSNA RAMESH AN 065
116 ROBERT E. LEE DRIVE AC
WILMINGTON 28403 919 763-4901

SHAH, PRIYAVADAN MANEKLAL CD /IM 092
121 EDINBURGH ST. #208 A AC
CARY 27511 919 469-9919

SHAH, RAMESH MANHARLAL OBG 065
116 ROBERT E. LEE DRIVE AC
WILMINGTON 28401 919 791-2301

SHAH, TUSHAR NANDLAL 032
105 TIMBER HOLLOW CT. #329 S
CHAPEL HILL 27514 919 967-7970

SHALOM, ROSE P /IM 032
3108 CAMELOT CT. R
DURHAM 27705 919 684-3714

SHANKER, KASTURI GIRIJA U 042
117 WEST SEVENTH STREET AC
ROANOKE RAPIDS 27870 919 537-0023

SHANNON, GORDON J. GS /VS 080
1601 BRENNER AVE. AC
SALISBURY 28144 704 638-9000

SHANNON, JOHN JOSEPH, JR. GS 092
3616 KINGSHILL RD. AC
BIRMINGHAM, AL 35223

SHANNON, WILLIAM GARY AN 080
5020 OLD MOCKSVILLE RD. A AC
SALISBURY 28144 704 637-3599

SHAPIRO, DANIEL ALLEN AN 065
5627 WOOD DUCK CIR. A AC
WILMINGTON 28409 919 343-7000

SHAPIRO, MARK THOMAS OPH 041
1311 N. ELM ST. AC
GREENSBORO 27401 919 378-9993

SHAPIRO, MARVIN BERNARD IM /GE 060
1001 BLYTHE BLVD., STE. 500 AC
CHARLOTTE 28203 704 373-0700

SHAPIRO, WILLIAM HARTMAN IM /CD 081
RUTHERFORD INTERNAL MED. ASSOC AC
312 S. RIDGECREST AVE.,BOX 390
RUTHERFORDTON 28139 704 286-9036
FAX 704 286-1225

SHAPPLEY, BEN GORDON PD 074
300 BETHESDA DR. AC
GREENVILLE 27834 919 752-7141

SHARMA, DEVENDRA IM 051
P. O. BOX 1690 AC
SMITHFIELD 27577 919 934-5568

SHARP, MICHAEL CONAT PD 032
UNC, CB 7340 AC
FAMILY SUPPORT NETWORK
CHAPEL HILL 27599 919 966-2841

SHARPE, EUGENE BAXTER R /NM 011
200 PATTON MTN. ROAD A RT
ASHEVILLE 28804 704 252-1546

SHARPLESS, EDWARD ARTHUR PTH 041
DRAWER X-3 A AC
GREENSBORO 27402 919 854-6464

SHARPLESS, MARTHA KORNEGAY PD 041
1401 SUNSET DR. A AC
GREENSBORO 27408 919 378-0633

SHARPTON, BENNIE REEVES GS 044
106 BROADVIEW RD. A AC
WAYNESVILLE 28786 704 456-8633

SHASTRY, CHANDRASHEKARA IM /END 036
607 E. GARRISON BLVD. AC
GASTONIA 28054 704 866-4607

SHAVENDER, EUGENE FRANK GYN 032
PO BOX 15249 AC
3901 ROXBORO RD.
DURHAM 27704 919 479-4100

SHAVER, EDWARD FRANKLIN, JR. OT 060
1718 E. FOURTH ST., #303 AC
CHARLOTTE 28204 704 376-8436

SHAW, DALE RUSSELL DR 060
CHARLOTTE RADIOLOGY A * AC
PO BOX 36937
CHARLOTTE 28236 704 362-1945
FAX 704 362-7081

SHAW, FRANK STEDMAN PD /PDA 026
P. O. BOX 53127 A AC
FAYETTEVILLE 28305 919 484-3121

SHAW, ROBERT ARNETT PUD /IM 074
1705 W. SIXTH STREET AC
GREENVILLE 27834 919 752-6101

SHEALY, FRED GRAY, JR. GS /VS 045
561 FLEMING STREET AC
HENDERSONVILLE 28739 704 693-1778

SHEALY, RONALD BERNARD OTO 034
175 CHARLOIS BLVD., STE. 101 A AC
WINSTON-SALEM 27103 919 768-3361

SHEARIN, JACOB CONNELL PS /GS 034
1900 S. HAWTHORNE RD. AC
208 FORSYTH MEDICAL PARK
WINSTON-SALEM 27103 919 760-4783
FAX 919 760-4785

SHEARIN, WILBURN THADDEUS, JR. U 065
1905 GLEN MEADE ROAD A AC
WILMINGTON 28403 919 763-6251

SHEARIN, WILLIAM ARTHUR, SR. OPH 092
2800 BLUE RIDGE BLVD., STE.405 * AC
RALEIGH 27607 919 781-7373

SHEETS, DOUGLAS DEAN OBG 081
TRYON RD., PO BOX 1208 A P * AC
RUTHERFORDTON 28139 704 287-7383
FAX 704 287-8020

SHELBURNE, JOHN DANIEL PTH 032
BOX 3712, DUMC A * AC
DURHAM 27710 919 286-6925

SHELBURNE, PALMER FRIEND CD 041
1011 PROFESSIONAL VILLAGE A AC
GREENSBORO 27401 919 272-6133

SHELDON, FRANK CHADWICK EM /GS 007
BEAUFORT COUNTY HOSPITAL AC
EAST 12TH STREET
WASHINGTON 27889 919 975-4201

SHELDON, GEORGE FRANK GS /TRS 032
136 BURNETT-WOMACK BLDG. A AC
UNC, DEPT. OF SURGERY CB 7050
CHAPEL HILL 27599 919 966-4052
FAX 919 966-6009

SHELTON, STEPHEN LEE 074
3320 LANDMARK ST. C-8 A S
GREENVILLE 27834 919 355-5027

SHEN, SUNG FAN FP 026
2414 HOPE MILLS ROAD A P AC
FAYETTEVILLE 28304 919 424-2426

SHENOY, VITTAL B. PTH 060
7036 WHITEMARSH CT. A AC
CHARLOTTE 28210 704 379-5982

SHEPARD, CLAUDIA PRICHARD P 034
792 ROSLYN RD. A R
WINSTON-SALEM 27104 919 748-3605

SHEPARD, NICOLE PETERSEN 034
528 FINLEY ST. S
DURHAM 27705 919 382-7413

SHEPHERD, ROBERT EDWARD DR 041
P. O. BOX 13005 A AC
GREENSBORO 27415 919 273-0325

SHEPHERD, SUZANNE MOORE EM 074
PITT COUNTY MEM. HOSPITAL A AC
DEPT. OF EMERGENCY MED.
GREENVILLE 27858 919 551-2954

SHEREFF, RICHARD HENRY D /A 026
139 HUNTER CIRCLE * AC
FAYETTEVILLE 28304 919 323-4888

SHERERTZ, ELIZABETH F. D 034
300 S. HAWTHORNE RD. AC
DEPT. OF DERMATOLOGY
WINSTON-SALEM 27103 919 748-3926

SHERIDAN, ROBERT JOHN PD 064
101 NASH MEDICAL ARTS MALL AC
ROCKY MOUNT 27804 919 937-7979

SHERMER, RICHARD WAYNE PTH 032
UNC, DEPT. OF PTH-CB #7525 A AC
BRINKHOUS-BULLITT BLDG.228H
CHAPEL HILL 27599 919 966-2339

SHERRILL, KIMBERLY ANN P 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-6028

SHERRILL, THOMAS M. FP 074
106-F VICTORIA CT. R
GREENVILLE 27834 919 551-4100

SHERRILL, WILLIAM C., JR. PUD /IM 036
1896 REMOUNT RD. AC
GASTONIA 28054 704 867-0735

SHERRINGTON, BRIAN THOMAS PD 063
195 W. ILLINOIS AVE. A AC
SOUTHERN PINES 28387 919 692-2444
FAX 919 692-3651

SHETTERLY, ROGER DAVIS OPH 045
1027-B FLEMING STREET AC
HENDERSONVILLE 28739 704 693-4161

SHICK, JAFAR MO AN 092
7321 GRIST MILL RD. A AC
RALEIGH 27609 919 755-8000

SHIEH, RICHARD CHEN HAI R 009
204 HARWOOD ST. AC
ELIZABETHTOWN 28337 919 862-4043

SHIELDS, CHARLES ROBERT PM 011
PO BOX 15025 A AC
ASHEVILLE 28813 704 274-2400

SHIELDS, MILTON BRUCE OPH 032
DUKE UNIVERSITY EYE CENTER A AC
DURHAM 27710 919 684-2841

SHIH, DEBORAH P. 032
2613 CAMELLIA DR. A S
DURHAM 27705 919 383-2016

SHIMM, CYNIA BROWN P /PYA 032
2609 N. DUKE ST. STE. 103 AC
DURHAM 27704 919 471-3487

SHINGLETON, WILLIAM WARNER GS 032
BOX 3814, DUMC A L
DURHAM 27710 919 684-2282

SHINN, GEORGE CLYDE GP 080
111 N. MAIN STREET A L
CHINA GROVE 28023 704 857-7098

SHIREY, JOHN LUTHER A 011
NEW LEICESTER HIGHWAY A L/RT
RT. #4, BOX 1525
ASHEVILLE 28806 704 683-2360

SHIRLEY, ROBERT E.L., JR. OBG 060
2015 RANDOLPH RD. #101 AC
CHARLOTTE 28207 704 376-3536

SHIVERS, JAMES ALLISON DR /NM 011
STE. 301, 445 BILTMORE CENTER AC
ASHEVILLE 28801 704 254-2371

SHNEIDERMAN, AMIRAM 034
PO BOX 15122 * S
WINSTON-SALEM 27113 919 785-2157

SHOAF, EDWIN HUSS, JR. IM 060
491 N. WENDOVER RD. AC
CHARLOTTE 28211 704 366-7291

SHOCKLEY, WILLIAM W. HNS /OTO 032
UNC, 610 BURNETT-WOMACK BLDG. A AC
CB #7070
CHAPEL HILL 27599 919 966-3341

SHOLAR, PAM WESTMORELAND ON /HEM 049
750-B HARTNESS RD. AC
STATESVILLE 28677 704 872-3630

SHOOK, EARL LESTER, JR. U 011
FF3 CROWFIELDS LANE L/RT
ASHEVILLE 28803 704 274-1998

SHORT, EARL DEGREY, JR., P 060
501 BILLINGSLEY RD. A AC
CHARLOTTE 28211 704 358-2700

SHORT, SYDNEY GLEN IM 041
1702 WESTCHESTER DR. AC
DALTON, GA 30720

SHOWN, THOMAS EARL U 034
2932 LYNDHURST AVENUE AC
WINSTON-SALEM 27103 919 765-4021

SHUFORD, FULLER ADAMS GE /IM 011
49 MCDOWELL ST. AC
ASHEVILLE 28801 704 258-3870

SHUFORD, WILLIAM FERRELL, JR. GE 065
1515 DOCTOR'S CIRCLE AC
WILMINGTON 28401 919 763-5182
FAX 919 762-9419

SHUGART, HENRY EDWARD 034
1749 CAMDEN RD. A S
WINSTON-SALEM 27103 919 724-0308

SHUGART, MARGARET ANN P /CHP 032
329 RIDGECREST DR. A C
CHAPEL HILL 27514 919 688-9003

SHULER, JIMMIE BLAKE PD 032
1002 W. KNOX ST. C
DURHAM 27701 919 683-4334

SHULL, KENNETH CASTLES GS /CDS 040
P. O. BOX 5229 A AC
HIGH POINT 27262 919 887-3164

SHULL, LONNIE NEWELL, JR. GS 014
PO BOX 1648 A AC
LENOIR 28645 704 758-5501

SHULL, WILLIAM HENRY IM 060
1900 RANDOLPH ROAD A L
CHARLOTTE 28207 704 376-4836

SHULTZ, KIRKWOOD TANNER IM /END 060
101 W. T. HARRIS BLVD. A AC
CHARLOTTE 28213 704 374-1696

SHULTZABERGER, RICHARD Z. IM 074
620 S. MEMORIAL DR. AC
GREENVILLE 27834 919 752-6101
FAX 919 752-7781

SHUPECK, MALCOLM NS 063
ONE MEMORIAL DRIVE AC
PINEHURST 28374 919 295-0237

SHUPING, JOHN ROSS N 074
2501 STANTONSBURG RD. * AC
GREENVILLE 27834 919 752-4848

SIBERT, KAREN SULLIVAN AN 032
GUILFORD ANESTHESIA A AC
PO BOX 9283
GREENSBORO 27408 919 691-6549

SICILIA, CARLOS ALEJANDRO GS /VS 036
902 COX RD., STE. G A AC
GASTONIA 28054 704 864-7821

SIDES, EVIN HENDERSON, III IM /ID 092
3320 EXECUTIVE DR. AC
RALEIGH 27609 919 876-9688

SIDES, STEPHEN N., II 074
106-A VICTORIA CT. S
GREENVILLE 27834 919 355-5185

SIDHU-MALIK, NAUJEET KAUR 032
3611 UNIVERSITY DR., APT. 21R R
DURHAM 27707 919 684-2291

SIEGEL, GLENN N. P 011
HIGHLAND HOSPITAL AC
PO BOX 1101
ASHEVILLE 28802 704 254-3201

SIEKER, HERBERT OTTO IM /PUD 032
3949 PLYMOUTH RD. L/RT
DURHAM 27707 919 684-3907

SIEWERS, CHRISTIAN FOGLE ORS /PM 026
1605 HATHERLEIGH DR. A L/RT
FAYETTEVILLE 28304 919 484-4140

SIGAL, BARRY WM. PUD /IM 034
3001 LYNDHURST AVE. A AC
WINSTON-SALEM 27103 919 765-0383
FAX 919 768-1737

SIGMAN, KENNETH MARTIN GE /IM 076
550 WHITE OAK ST. AC
ASHEBORO 27203 919 625-3218

SIGMON, JAMES LEWIS, JR. FP 060
P. O. BOX 32861 A AC
CHARLOTTE 28232 704 355-3172

SIGMON, JOY ELAINA 074
R-10 DOCTORS PARK APTS. A S
GREENVILLE 27834

SIGMON, LEE MERRELL PTH /DMP 045
121 TIMBER CREEK ROAD AC
HENDERSONVILLE 28739 704 693-6522

SIGMON, RICHARD LEE, JR. GE /PD 060
1900 RANDOLPH RD., STE. 310 A AC
CHARLOTTE 28207 704 372-7974
FAX 704 372-4966

SIKES, THOMAS EDWARD, JR. ORS 013
109 COUNTRY CLUB DR., NE A AC
CONCORD 28025 704 786-5122

SILBERMAN, HAROLD REITER EM /IM 032
NPC 3-96. FI,V AC
DURHAM 27710 919 684-5537
FAX 919 681-6214

SILBIGER, STEPHEN ALAN IM 060
5516 CENTRAL AVE. AC
CHARLOTTE 28227 704 551-4200

SILLMON, DAVID WILDE IM /HEM 041
1511 WESTOVER TERRACE AC
GREENSBORO 27408 919 373-0611

SILVER, DANNY 032
134 FRIAR LANE S
CARRBORO 27510 919 942-4770

SILVER, KRISTI DIANE IM 092
PO BOX 30786 A AC
RALEIGH 27609 919 847-8821

SILVERMAN, JAN FRANKLIN PTH 074
DEPT.OF PTH, BRODY BLDG. 1F-79 A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-5910

SILVERTHORNE, RAY GUILFORD OBG 007
RT. #2, BOX 35 A L/RT
WASHINGTON 27889 919 946-5168

SILVOY, EDWARD JOHN OTO /PS 036
1010 X-RAY DR. A AC
GASTONIA 28054 704 865-7677

SIMEL, PAUL JOSEPH OPH 041
300 W. NORTHWOOD ST. AC
GREENSBORO 27401 919 275-5673

SIMMONS, CHARLES NUMA R 006
PO BOX 26 A AC
CROSSNORE 28616 704 733-3203

SIMMONS, DUNCAN RUSSELL 074
#18 AZALEA GARDENS A S
GREENVILLE 27858 919 757-1806

SIMMONS, EVERETT CASEY P 074
DEPT. OF PSYCHIATRY A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2660

SIMMONS, JAMES SLATER FP 053
P. O. BOX 850 A L/RT
SANFORD 27330 919 775-7425

SIMMONS, JIMMIE DALE PH /FP 086
SURRY COUNTY HEALTH DEPT. AC
PO BOX 1062
DOBSON 27017 919 386-9400

SIMNAD, VIRGINIA I. 032
106-B WEATHERSTONE DR. S
CHAPEL HILL 27514 919 968-4109

SIMON, JIMMY L. PD 034
BOWMAN GRAY, DEPT. OF PED. AC
WINSTON-SALEM 27103 919 748-4431
FAX 919 748-4204

SIMON, ROBERT CURRIE GS 092
3100 DURALEIGH RD. C
RALEIGH 27607 919 881-5580

SIMONS, WILLIAM JOHN P /IM 000
SHEPPARD PRATT HOSP. AC
6501 N. CHARLES ST.
BALTIMORE, MD 21285 310 938-3000

SIMONSON, DELLA SUE PD /PH 039
MURDOCH CENTER AC
BUTNER 27509 919 575-7631

SIMONTON, CHARLES ALISON, III IM /CD 060
1001 BLYTHE BLVD., STE. 300 A AC
CHARLOTTE 28203 704 373-1503

SIMPKINS, DARRELL G. EM /GPM 063
110 EDINBORO DR. AC
SOUTHERN PINES 28387 919 295-7777

SIMPKINS, KENNY LEON U 011
100 VICTORIA DR. A AC
ASHEVILLE 28801 704 254-8883

SIMPSON, EUGENE MYERS, JR. PD 034
250 CHARLOIS BOULEVARD AC
WINSTON-SALEM 27103 919 768-4730

SIMPSON, JOHN LARRY FP 076
DRAWER 220 AC
ASHEBORO 27204 919 625-6174

SIMPSON, MARSHALL CRAIG FP 067
COASTAL FAMILY CLINIC A AC
410 NEW BRIDGE ST.
JACKSONVILLE 28540 919 347-1788

SIMPSON, PATRICK JOSEPH 032
RR #1, BOX 318 * S
MOUNT OLIVE 28365 919 929-7198

SIMS, STEPHEN HUBERT ORS 060
10620 PARK RD., STE. 126 A AC
CHARLOTTE 28210 704 542-5206

SIMS, WILLIAM LEONARD NS 018
1985 TATE BLVD. SE, STE. 323 A P * AC
HICKORY 28602 704 324-9609

SINAR, DENNIS ROBERT GE /IM 074
DEPT. OF MEDICINE A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4652

†SINCLAIR, LOUIS GORDON GS /GYN 092
3309 WHITE OAK ROAD A
DECEASED--1-11-91
RALEIGH 27609 919 787-9356

SINCLAIR, ROBEY THOMAS, JR. DR 065
5301 WRIGHTSVILLE AVENUE A L/RT
WILMINGTON 28401 919 395-8100

SINCLAIR, SHERRY LYNN 074
1313 TREYBROOKE CIR. A S
GREENVILLE 27834 919 752-4742

SINCOX, FRANCIS JOHN, JR. FP 023
PO BOX 1309 A AC
KINGS MOUNTAIN 28086 704 739-3681

SINGER, JAMES WILLARD PD 041
1209 MAGNOLIA STREET A AC
GREENSBORO 27401 919 274-0106

SINGER, LAWRENCE ROBERT OBG 034
250 CHARLOIS BOULEVARD AC
WINSTON-SALEM 27103 919 768-4730

SINGH, MANMOHAN GS 051
713 NORTH ST. AC
PO BOX 1196
SMITHFIELD 27577 919 934-2616

SINGH, RANBIR ORS 076
542 WHITE OAK STREET AC
ASHEBORO 27203 919 629-4171

SINGLETARY, HENRY PATE PTH 065
2131 S. 17TH ST. A P AC
WILMINGTON 28401 919 343-7074

SINGLETARY, WILLIAM VANCE, JR. GE 032
PO BOX 16999 A AC
4205 BEN FRANKLIN BLVD.
DURHAM 27704 919 682-5561

SINGLEVICH, THOMAS E. AN /PA 060
PO BOX 97 AC
POMFRET, CT 06258

SINK, MARY ANNE 074
329 LINDSAY DR. #I-7 A S
GREENVILLE 27834 919 355-5141

SINNING, MARK ALAN TS /VS 025
800 HOSPITAL DR. A * AC
NEW BERN 28560 919 638-8118

SINTHUSEK, CHIRAPA IM /END 034
1200 TARTAN CT. A AC
WINSTON-SALEM 27106 919 725-4741

SIRISENA, OMATTA MUDALIGE IM /P 064
PO BOX 7366 AC
ROCKY MOUNT 27801 919 443-7678

SISCO, LANCE THAYER 034
516 WEST END BLVD. R
WINSTON-SALEM 27101 919 748-2011

SIVA, SIVALINGAM NS 036
900 COX ROAD A P AC
GASTONIA 28054 704 865-7655

SIY-HIAN, BIENVENIDO CHAN IM /CD 082
RT. #6, BOX 553 AC
CLINTON 28328

SKEEN, WILLIAM WALDO FP 049
417 E. STATESVILLE AVENUE AC
MOORESVILLE 28115 704 663-3063

SKIPPER, ERIC RAY 074
PITT COUNTY MEM. HOSP. A R
DEPT. OF SURGERY #204
GREENVILLE 27858 919 551-4629

SKOWRONEK, DAVID GORDON EM /ORS 080
350 SPICEWOOD LANE AC
SALISBURY 28144 704 638-1035

SKRINCOSKY, PETER JOHN 034
1608 NORTHWEST BLVD., APT. K S
WINSTON-SALEM 27104 919 721-9127

SKRIP, STEPHEN M. EM 074
319-G ST. ANDREWS DR. A R
GREENVILLE 27834 919 355-6233

SLATE, FRANCIS WESLEY GS 034
P. O. BOX 407 L/RT
MOCKSVILLE 27028 704 634-6121

SLATE, MARVIN LONGWORTH FP 040
607 HUNTINGTON DR. A L/RT
HIGH POINT 27262 919 883-9756

SLATER, ROBERT RANDALL, JR. ORS 032
14 SWALLOWS RIDGE CT. R
DURHAM 27713 919 966-4131

SLATKOFF, MARC LESTER ON /HEM 034
2825 LYNDHURST AVE., STE. 103 A P AC
WINSTON-SALEM 27103 919 768-0325
FAX 919 768-2412

SLEDGE, JOHN BURTON, JR. PH 070
P. O. BOX 610 A AC
KILL DEVIL HILLS 27948 919 441-6182

SLIWINSKI, STANLEY FRANCIS,JR. OPH 049
PO BOX 1821 AC
STATESVILLE 28677 704 878-2011

SLOAN, DAVID BRYAN, III OPH 034
245 OAKWOOD COURT R
WINSTON-SALEM 27103 919 748-3504

SLOAN, DAVID BRYAN, JR. OPH 065
1915 GLEN MEADE ROAD A AC
WILMINGTON 28403 919 763-3601

SLOAN, JAMES BOYKIN OPH 065
1915 GLEN MEADE ROAD A AC
WILMINGTON 27403 919 763-3601

SLOAN, JAMES MARSHALL, III FP /IM 011
942 TUNNEL ROAD AC
ASHEVILLE 28805 704 298-7972

SLOOP, CATHERINE MARIE 034
1705 GALES COURT S
WINSTON-SALEM 27103 919 748-9452

SLOOP, NORMAN RAY GP 080
310 STATESVILLE BOULEVARD A AC
SALISBURY 28144 704 636-5326

SLOOP, ROBERT F., JR. OPH 098
WILSON CLINIC A AC
WILSON 27893 919 291-7008

SLOTKIN, ROBERT IRVING PD 060
2317 RANDOLPH ROAD AC
CHARLOTTE 28207 704 376-5572

SLOTNICK, LAWRENCE SHELDON PUD /IM 041
802 GREEN VALLEY RD., STE. 210 A AC
GREENSBORO 27408 919 275-7238

SLUDER, FLETCHER SUMPTER OBG 011
472 CHUNN'S COVE ROAD A L/RT
ASHEVILLE 28805 704 252-7374

SLUSHER, M. MADISON OPH 034
300 S. HAWTHORNE RD. AC
BOWMAN GRAY SCH. OF MED.
WINSTON-SALEM 27103 919 748-4091

SLYMAN, JAMES FRANCIS OPH 029
2 HOSPITAL DR. A P AC
LEXINGTON 27292 704 243-2436

SMALES, WILLIAM PALMER 034
STUDENT BOX 411, BOWMAN GRAY S
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 351-4144

SMALL, FAIRLEIGH DAVID EM 070
3605 SHEFFIELD DR. A C
ROCKY MOUNT 27801 919 633-8104

SMALL, KENT WILSON OPH 032
1143 PLANTATION LN. R
MT. PLEASANT, SC 29464

SMALLEY, ROBERT ROWAN GS 065
415 BUCCANEER RD. A RT
WILMINGTON 28409

SMALLWOOD, JAMES CLAYTON OBG /IM 050
201 ASHEVILLE HWY, STE. 100 A AC
SYLVA 28779 704 586-2135

SMELZER, TIMOTHY HARVEY IM /PUD 032
891 W. WILLOW DRIVE AC
CHAPEL HILL 27514 919 942-5123

SMERASKI, PHILIP JOHN P 074
DEPT. OF PSYCHIATRIC MED. A AC
ECU SCHOOL OF MED. BRODY 4E-98
GREENVILLE 27858 919 551-2660

SMETHIE, WILLIAM MASSIE, SR. GS 004
PO BOX 651 A L/RT
WADESBORO 28170 704 694-2657

SMIDEBUSH, GERALD CHARLES 034
5440 MORAVIAN HEIGHTS LN. R
CLEMMONS 27012 919 748-2471

SMILEY, MARGARET L. IM 032
BURROUGHS WELLCOME CO. AC
3030 CORNWALLIS RD.
RESEARCH TRI. PARK 27709

SMITH, ALLEN ORLIN N 018
415 N. CENTER ST., STE. 202 A AC
HICKORY 28601 704 327-9869

SMITH, BERNARD MICHAEL GS /VS 091
VANCE MEDICAL ARTS BLDG. A AC
RUIN CREEK ROAD
HENDERSON 27536 919 438-2070

SMITH, BRENDAN EDWARD 060
CAROLINAS MED. CTR. AC
CHARLOTTE 28232 704 338-3176

SMITH, CAMERON LANGLEY D 074
1705 W. SIXTH STREET AC
GREENVILLE 27834 919 752-4124

SMITH, CHRISTOPHER EDMUND ORS 001
723 EDITH ST. AC
BURLINGTON 27215 919 227-4256

SMITH, CLAUDE ALFRED R 034
3155 MAPLEWOOD AVENUE A AC
WINSTON-SALEM 27103 919 765-2702

SMITH, DALLAS AARON, JR. DR 041
4507 KENBRIDGE DRIVE AC
GREENSBORO 27410 919 854-1311

SMITH, DAVID ALDEN FP 032
6350 QUADRANGLE DR. AC
CHAPEL HILL 27514 919 967-4202

SMITH, DAVID CLARK IM 029
102 WESTOVER DRIVE A L/RT
LEXINGTON 27292 704 246-2929

SMITH, DAVID LAWRENCE GS 032
5001 CAROLWOOD LANE R
DURHAM 27707 919 966-4131

SMITH, DAVID NIMMONS IM /CD 080
102 MOCKSVILLE AVE., STE. 103 AC
SALISBURY 28144 704 636-6632

†SMITH, DAVID TILLERSON PUD 004
GENERAL DELIVERY A
DECEASED--1990
PAWLEYS ISLAND, S. C. 29585

SMITH, DONALD DEWEY PD 041
1200 N. ELM ST. A * AC
GREENSBORO 27401 919 379-4025

SMITH, DUANE HOWARD OBG 097
112 BOONE TRAIL AC
N. WILKESBORO 28697 919 667-8241
FAX 919 667-7389

SMITH, ELLISON L. 032
502-B COOLIDGE ST. A S
CHAPEL HILL 27516 919 942-2335

SMITH, ELTON TRAVIS, JR. 032
601 JONES FERRY RD., APT. B-9 A S
CARRBORO 27510 919 968-3554

SMITH, ERASTUS, JR. IM 053
136-C CARBONTON RD. AC
PO BOX 3184
SANFORD 27330 919 775-5457

SMITH, EUGENIA BRITT 032
1008 S. COLUMBIA ST. A R
EMERGENCY DEPT.
CHAPEL HILL, 27514 919 551-4100

SMITH, EUSTACE HENRY FP 006
BOX 190 A L
CROSSNORE 28616 704 733-9297

SMITH, EVERETT DUANE GP 011
BOX 1030 A AC
CANDLER 28715 704 667-2526

SMITH, HENRY LOUIS, II PD 060
1700 ABBEY PLACE A * AC
CHARLOTTE 28209 704 523-7232

SMITH, HENRY W. B., III CD /IM 041
301 W. WENDOVER DR., STE. 200 A AC
GREENSBORO 27405 919 274-3241

SMITH, IRA Q. OBG 032
400 CRUTCHFIELD ST., STE. B AC
DURHAM 27704 919 471-1573

SMITH, JAMES DAVID PD 074
2284 ASHLEY RIVER RD. #1020 S
CHARLESTON, SC 29414 803 763-2265

SMITH, JAMES JEFCOAT GP 074
1903 BROOK ROAD L/RT
GREENVILLE 27834 919 756-3905

SMITH, JANE SWAN IM 092
3320 OLD WAKE FOREST RD. AC
RALEIGH 27609 919 872-4850

SMITH, JARVIS WILTON GS 001
316 GRAHAM-HOPEDALE RD. A AC
BURLINGTON 27217 919 227-3621

SMITH, JERRY EDWARD OBG 063
PO BOX 2000 A AC
PINEHURST SURGICAL CLINIC
PINEHURST 28374 919 295-0282

SMITH, JOHN BALDWIN, III N /CHN 034
160 CHARLOIS BLVD. A AC
WINSTON-SALEM 27103 919 768-5834

SMITH, JOHN BRASWELL, JR. FP 082
403 FAIRVIEW STREET AC
CLINTON 28328 919 592-6011

SMITH, JOHN RANDOLPH 074
1925 WHITE HOLLOW DR. A S
GREENVILLE 27834 919 355-0427

SMITH, KAREN LINNEAR FP 026
406-E WOODSTREAM TRAIL R
FAYETTEVILLE 28314 919 323-1152

SMITH, KAREN MARIE 034
1605-P ZUIDER ZEE DR. S
WINSTON-SALEM 27127 919 784-8762

SMITH, KEVIN LINDSAY PS /HS 060
2215 RANDOLPH RD. A AC
CHARLOTTE 28207 704 372-6846
FAX 704 342-0752

SMITH, LAFAYETTE LYLE IM 040
624 QUAKER LANE, SUITE 213-B A AC
HIGH POINT 27262 919 883-4131

SMITH, LATESSA ANNE 074
119 OAKMONT DR. A S
#30 LEXINGTON SQ II
GREENVILLE 27834 919 355-3286

SMITH, LLOYD HAMLIN EM 096
RT. #9, BOX 241-F A AC
GOLDSBORO 27534 919 736-1110

SMITH, LYNN KEBEL OBG 041
1507 WESTOVER TERR., STE. C A AC
GREENSBORO 27408 919 273-3661

SMITH, MELANIE ROWE 074
3534-B MARGUERITE LANE A S
WILSON 27893 919 237-9474

SMITH, MICHAEL EARL 074
1208 WHITEHALL ROAD A R
WINTERVILLE 28590 919 551-2404

SMITH, MICHAEL LEE D /PD 074
210 BENT CREEK DR. A AC
GREENVILLE 27834 919 551-2555

SMITH, MICHAEL SCOTT 034
140 ENDSLEY AVE. A S
WINSTON-SALEM 27106 919 659-6922

SMITH, NAT ERSKINE IM 034
2900 COUNTRY CLUB ROAD A AC
WINSTON-SALEM 27104 919 748-4524

SMITH, O. NORRIS IM 041
202 W. BESSEMER AVENUE A L/RT
GREENSBORO 27401 919 273-7494

SMITH, PETER KENT CDS 032
BOX 3442, DUMC A AC
DURHAM 27710 919 684-2890

SMITH, PHILIP PALMER OM /IM 065
P. O. BOX 2042 A AC
WILMINGTON 28402 919 371-4080

SMITH, RICHARD LLOYD GE 011
30 CHOCTAW STREET AC
ASHEVILLE 28801 704 254-0881

SMITH, RICHARD THOMAS, JR. PDC 060
1001 BLYTHE BLVD. STE. 300 A AC
CHARLOTTE 28203 704 373-1503

SMITH, ROBERT CLEMENT IM /EM 006
BOX 248 A AC
BANNER ELK 28604 704 898-5588

SMITH, ROBERT LEE PTH 086
320 ROBIN ROAD A AC
MOUNT AIRY 27030 919 789-9710

SMITH, ROBERTS HERBERT ALVIN 032
BOX 3214, DUMC R
DURHAM 27710

SMITH, ROGER ENOS CD /IM 060
125 BALDWIN AVE. A AC
CHARLOTTE 28204 704 374-1696

SMITH, SCOTT VICTOR 032
4639 HOPE VALLEY RD. APT. J A S
DURHAM 27705

SMITH, SHARON ROBERTA 034
300 S. HAWTHORNE RD. * S
MEDICAL STUDENT
WINSTON-SALEM 27103 919 785-0956

SMITH, SPENCER MARION 032
5543 GENESTA WALK S
ST. LOUIS, MO 63123 301 493-8395

SMITH, STEPHEN BRIAN AN 065
125 BRETONSHIRE RD. AC
WILMINGTON 28405 919 343-7697

SMITH, STEPHEN KEITH FP 012
103 MEDICAL HEIGHTS DR. AC
MORGANTON 28655 704 437-4211
FAX 704 438-1025

SMITH, STEPHEN WAYNE IM /CD 092
2800 BLUE RIDGE, STE. 205 AC
RALEIGH 27607 919 782-0414

SMITH, THOMAS WARREN IM 055
LINCOLN MEDICAL PK, STE. 104 AC
LINCOLNTON 28092 704 735-6939

SMITH, TIMOTHY CARL IM 064
1051 COUNTRY CLUB DR. A AC
PO BOX 7828
ROCKY MOUNT 27804 919 937-4084

SMITH, TIMOTHY EARL 034
500 GAITHER RD. A S
WINSTON-SALEM 27101 919 722-0865

SMITH, WHITMAN ERSKINE, JR. GS /VS 084
P. O. BOX 1398 AC
ALBEMARLE 28001 704 982-0161

SMITH, WILLIAM M. FP 095
815 E. KING STREET AC
BOONE 28607 704 264-3521

SMITH, WILLIAM SIEGFRIED, JR. GYN 041
104 W. NORTHWOOD STREET * AC
GREENSBORO 27401 919 378-1843

SMITH, WILLIAM THOMAS 074
1230 TREYBROOK CR. A * S
GREENVILLE 27834 919 758-0735

SMITHWICK, JAMES DAVID PD 083
ROUTE #3, BOX 238-B AC
LAURINBURG 28352 919 276-7570

SMOLEN, PAUL MATHIEU PD 060
427 N. WENDOVER RD. AC
CHARLOTTE 28211 704 364-3740

SMOLOWITZ, EDWIN LARRY U 045
735 6TH AVE. WEST AC
HENDERSONVILLE 28739 704 697-0527

SNIDER, BOBBY EUGENE GP 029
206-B W. CENTER ST. AC
LEXINGTON 27292 704 246-4212

SNIPES, RICHARD DEAN GYN 026
P. O. BOX 53514 L
FAYETTEVILLE 28305 919 485-1191

SNITZ, ARNOLD IRA PD 060
2620 E. SEVENTH ST. A AC
CHARLOTTE 28204 704 332-7141

SNODDY, WILLIAM RAY FP 011
N-1 DOCTOR'S DR. AC
ASHEVILLE 28801 704 252-8885

SNOW, SIDNEY LEWIS U 014
328 MULBERRY STREET, S.W. AC
LENOIR 28645 704 754-2166

SNYDER, ALEXANDER BENJAMIN IM 090
1420 E. FRANKLIN ST. AC
MONROE 28110 704 289-8427

SNYDER, DAVID KEITH IM /END 074
DEPT. OF MED/SEC. OF ENDOC. AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2571

SNYDER, EDWARD SUTTON DR /NM 092
1216 BARCROFT PLACE A AC
RALEIGH 27615 919 847-1289

SNYDER, JAMES WILLIAM CD /IM 065
1515 DOCTOR'S CIRCLE AC
WILMINGTON 28401 919 763-5182

SNYDER, JOHN MICHAEL AN 060
935 EAGLE ROAD A AC
WEDDINGTON 28173 704 384-4274

SNYDER, RALPH EUGENE IM 063
MEDICAL REVIEW OF NC, INC. * AC
PO BOX 37309
RALEIGH 27627 919 851-2955
FAX 919 851-8457

SNYDERMAN, RALPH IM 032
DUMC, BOX 3701 A * C
DURHAM 27710 919 684-2255

SO, GERALD MENDOZA 034
4555 MACARTHUR BLVD. NW #104 S

SOBEL, GARY ALLEN IM /HEM 060
3830 RIVER RIDGE RD. * AC
CHARLOTTE 28226 704 551-4200

SODEN, KEVIN JOSEPH OM /EM 060
7019 WHITEMARSH COURT A P AC
CHARLOTTE 28210 704 554-2656
FAX 704 554-2907

SODERSTROM, LAWRENCE PAUL DR /NM 036
148 BERRY MOUNTAIN RD. A AC
CRAMERTON 28032 704 864-4378
FAX 704 864-4608

SOHMER, MARCUS FRANK, JR. GE /IM 034
9808 REYNOLDA RD. A P * AC
TOBACCOVILLE 27050 919 924-0857

SOLOMON, DONALD JEFFREY N 065
1310 MEDICAL CENTER DR. AC
WILMINGTON 28401 919 341-3300

SOLOMON, ROBERT DOUGLAS PTH /GER 065
113 S. BELVEDERE DR. RT
HAMPSTEAD 28443 919 270-2019

SOLTYS, JOHN JOSEPH P /CHP 032
707 GREENWOOD RD. AC
CHAPEL HILL 27514 919 966-5277

SOMERS, WILLIAM ALAN ORS 032
PO BOX 15249 A AC
3901 ROXBORO RD.
DURHAM 27704 919 479-4100

SOMERSTEIN, DAVID EUGENE U 060
3535 RANDOLPH RD. #W106 AC
CHARLOTTE 28211 704 365-0371
FAX 704 365-0410

SOMKUTI, STEPHEN GEORGE 032
2601 STUART DR. S
DURHAM 27707 919 489-9434

SOMMERVILLE, LEWIS CASS FP 011
1425 PATTON AVENUE A AC
ASHEVILLE 28806 704 254-5385

SONG, DAVID H. 032
30 HOLLAND DRIVE #18 S

SONG, JULIET KIM AN 074
1705 W. 6TH ST. A AC
GREENVILLE 27834 919 752-1433

SONKIN, PETER LAURENCE 032
4800 UNIVERSITY DR., APT. 28P S
DURHAM 27707 919 490-5310

SOOD, ANIL KUMAR 032
1002 WILLOW DR., UNIT 14 * S
CHAPEL HILL 27514 919 942-4145

SOPER, HERBERT ALVA GYN /OBS 034
1901 S. HAWTHORNE RD. STE. 320 A AC
WINSTON-SALEM 27103 919 768-1180

SORGE, JOHN PHILLIP PTH 092
4420 LAKE BOONE TRAIL A AC
DEPT. OF PATHOLOGY
RALEIGH 27607 919 783-3062

SORIANO, CLINTON REYES CDS 034
1901 S. HAWTHORNE RD. STE. 340 A P AC
WINSTON-SALEM 27103 919 765-6277

SORROW, JOHN MITCHELL, JR. IM /CD 032
PO BOX 2431 A L/RT
CHAPEL HILL 27515 919 929-7073

SOTO, PABLO F. 032
15 DURBIN PL. A S
DURHAM 27705 919 383-4367

SOTOLONGO, CARLOS A. FP 032
5501 FORTUNE RIDGE DR., STE. A AC
DURHAM 27713 919 544-3737

SOUTH, STEPHEN ALAN IM 034
2219 GREENBRIER DR. R
CHARLOTTESVILLE, VA 22901 703 981-7000

SOUTHARD, JOHN K., JR. D 034
3111 MAPLEWOOD AVE., STE. 107 AC
WINSTON-SALEM 27103 919 768-1280

SOUZA, JOSEPH JOHN 032
1250-M3 EPHESUS CHURCH RD. A R
CHAPEL HILL 27514

SOWDEN, RICHARD GUY U 090
1503 E. FRANKLIN STREET A AC
MONROE 28110 704 289-5402

SOX, CARL CAUGHMAN GP 051
701 HWY 222 EAST A L
KENLY 27542 919 284-2732

SPAETH, WALTER IM 070
1904 RIVERSHORE ROAD A L/RT
ELIZABETH CITY 27909 919 335-7389

SPAIN, ROBERT SPRUILL IM /ADM 092
3707 OLD LASSITER MILL ROAD AC
RALEIGH 27609 919 782-2805

SPANARKEL, MARYBETH IM /GE 032
PO BOX 16999 A AC
4205 BEN FRANKLIN BLVD.
DURHAM 27704 919 682-5561

SPANGENTHAL, SELWYN PUD 060
1350 S. KINGS DR. AC
CHARLOTTE 28207 704 372-8750
FAX 704 332-7020

SPANGLER, ERNEST BURTON R 041
DRAWER X-3 A * AC
GREENSBORO 27402 919 854-6546
FAX 919 854-6779

SPANGLER, JOHN GIVEN FP /PH 000
722 GALES AVE. R
WINSTON-SALEM 27103 301 955-5000

SPANGLER, KEVIN MARTIN 034
2540 WESTOVER A S
WINSTON-SALEM 27103 919 722-7532

SPANGLER, THOMAS CLAYTON ORS 034
2925 BRIGHAM ST. A C
WINSTON-SALEM 27103 919 765-9314
FAX 919 765-9313

SPARGO, JOHN PRICHARD FP 080
P. O. BOX 278 A AC
COOLEEMEE 27014 704 284-2331

SPARKS, EDWIN WAYNE, JR. 034
459 S. HAWTHORNE RD., APT. F A S
WINSTON-SALEM 27103 919 722-9117

SPARLING, PHILIP FREDERICK ID /IM 032
UNC, DEPT. OF MEDICINE AC
CHAPEL HILL 27599 919 966-4466

SPARROW, HARRY WARD IM 041
342 N. ELM STREET A L
GREENSBORO 27401 919 275-8436

SPARROW, NATHANIEL LOUIS OTO 092
3010 ANDERSON DR. AC
PO BOX 18946
RALEIGH 27619 919 787-7171

SPAUGH, EARLE PD /ADL 060
411 N. WENDOVER RD. S/RT
CHARLOTTE 28211 704 375-9795

SPEES, LYNN BEECHER PD 018
THE CHILDHEALTH CENTER A AC
1375 4TH ST. DR. NW
HICKORY 28601 704 322-4453

SPEIGHT, KEVIN LEWIS AN 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4498
FAX 919 748-6840

SPEIGHT, LISA WHITE 034
2075 QUEEN ST. S
WINSTON-SALEM 27103 919 722-7814

SPENCE, PAUL ANTHONY CDS 074
ECU SCH. OF MEDICINE A AC
DEPT. OF CARDIAC SURG.
GREENVILLE 27858 919 551-4822
FAX 919 551-5192

SPENCER, ALLEN GS /GYN 080
820 W. HENDERSON STREET AC
SALISBURY 28144 704 633-2883

SPENCER, FREDERICK BRUNELL, JR IM 080
803 CONFEDERATE AVE. L/RT
SALISBURY 28144 704 636-5016

SPENCER, JOHN PAUL ORS 011
111 VICTORIA AT OAKLAND A AC
ASHEVILLE 28801 704 252-7331

SPENCER, RICHARD LEWIS P 034
3309-A HEALY DRIVE AC
WINSTON-SALEM 27103 919 765-6525

SPENCER, ROGER FELIX P /PYA 032
UNC HOSPITALS AC
201 SOUTH WING, CB 7160
CHAPEL HILL 27599 919 966-4622

SPENCER, WILLIAM JOSEPH IM /CD 034
3310 BROOKVIEW HILLS BLVD.#106 * AC
WINSTON-SALEM 27103 919 765-6020

SPENGLER, JOHN ROBERT R 045
104 ROCKY TOP DR. AC
HENDERSONVILLE 28739 704 692-7534

SPEROS, THOMAS LEE FP 007
501 WEST 15TH STREET * AC
WASHINGTON 27889 919 975-2667

SPICER, SAMUEL SHERMAN EM /FP 065
5801 OAK BLUFF LN. * AC
WILMINGTON 28409

SPIGGLE, JOHN ALEXANDER U 012
500 E. PARKER ROAD A AC
MORGANTON 28655 704 433-5141

SPILKER, BERTRAM ALLEN PA /IND 032
3030 CORNWALLIS RD. A AC
RESEARCH TRIANGLE PK 27709 919 248-4655

SPIRO, PHILIP MARGET P 032
800 EASTOWNE, STE. 106 R
CHAPEL HILL 27514 919 471-8667

SPIVEY, DAVID EUGENE, JR. FP 092
1005 VANDORA SPRINGS RD. C
GARNER 27529 919 772-4756

POCK, ALEXANDER PDA /A 032
9 BENTGRASS LN. A
DURHAM 27710 919 383-6054

PRAGINS, JOEL FRED GE /IM 023
808 N. WASHINGTON ST. A AC
SHELBY 28150 704 482-1482

PRAGUE, DAVID HUGH AN 032
UNC-DEPT. OF ANES. A * AC
CHAPEL HILL 27599 919 966-3371

PREHE, SAMUEL EDWARD OTO 001
1206 VAUGHN RD. A P AC
BURLINGTON 27215 919 226-0660

PRINGER, DONNA JEAN TR 060
4421-301 HEDLEY WAY A C
CHARLOTTE 28210 704 552-5171

PRINKLE, LAWRENCE TILSON GP 011
BOX 218, 104 N. MAIN ST. A L
WEAVERVILLE 28787 704 645-3031

PRITZER, CHARLES EDWARD DR 032
BOX 3808, DUMC A AC
DURHAM 27710 919 660-2711

PRUILL, THOMAS RAYFORD P 032
1101 N. DUKE ST. AC
DURHAM 27701 919 687-4224

PRUNT, WM HUTCHINSON, III R /NM 092
6508 BROOKHOLLOW DR. A AC
RALEIGH 27615 919 787-8199

PURR, CHARLES LEWIS ON /HEM 034
1845 BEUNA VISTA RD. A L/RT
WINSTON-SALEM 27104 919 777-3036

QUIRES, JERRY EWING PTH 060
PO BOX 36507 A AC
2425 PARK RD.
CHARLOTTE 28236 704 376-1661

QUIRES, RAYMOND JAY PTH 011
49 FOREST ROAD AC
ASHEVILLE 28803 704 274-4664

RAN, SARBJEET K. PD 018
1375 4TH ST. DR. NW AC
HICKORY 28601 704 322-4453

REBRO, SHARON HANOY 032
5511 FRENCHMEN'S CREEK DR. A S
DURHAM 27713 919 544-5983

T. CLAIR, SAMUEL KEITH NS 092
3009 NEW BERN AVE. A * AC
RALEIGH 27610 919 832-4448

T. CLAIR, STEVEN H. OM /ADM 013
84 LAKE CONCORD RD. NE #C A AC
CONCORD 28025 919 490-6202
FAX 704 784-4713

T. CLARIE, KAREN SUE 032
BOX 3500, DUMC AC
DURHAM 27710 919 684-3006

TABLER, CAREY VASTINE EM /IM 086
NORTHERN HOSP.-SURRY CO. A AC
MOUNT AIRY 27030 919 789-9541

TACK, RICHARD SEAN IM /CD 032
106 ALDER PLACE AC
CHAPEL HILL 27514 919 681-5089

TACK, ROBERT KEVIN CD /IM 060
2330 RANDOLPH RD. A AC
CHARLOTTE 28207 704 377-0575
FAX 704 358-9398

TACKHOUSE, WILLIAM JAMES IM /GER 096
201 COX BLVD. AC
GOLDSBORO 27530 919 734-9455

TAFFORD, STEVEN JAMES U 092
3320 WAKE FOREST RD. #100 AC
RALEIGH 27609 919 790-0036

TAFFORD, WILLIE RANSOME, JR. FP /OM 041
948 WALKER AVENUE A P AC
GREENSBORO 27403 919 275-7665

TAHL, JOHN ALLEN 032
BOX 2839, DUMC S
DURHAM 27710

TALHEIM, RODNEY MARTIN IM /CD 014
322 MULBERRY ST., SW AC
PO BOX 1020
LENOIR 28645 704 758-5544

TALLINGS, DAVEY BINGHAM GP 034
P. O. BOX 69 A AC
RURAL HALL 27045 919 969-9158

TALLINGS, MARTIN WADE PD 023
108 EDGEMONT DR. P AC
KINGS MOUNTAIN 28086 704 739-2521

STALLINGS, STEPHEN D., JR. GP 035
ROUTE #2, BOX 109 A L/RT
ZEBULON 27597 919 269-8802

STALLWORTH, WILLIAM KING OBG 060
2711 RANDOLPH RD.#305-A AC
CHARLOTTE 28207 704 372-8020

STAMEY, CHARLES CLAUD PD 034
3000 BETHESDA PL. #501 AC
WINSTON-SALEM 27103 919 768-6830

STANKUS, PAUL VICTOR AN 032
7 LITCHFORD ROAD A P AC
CHAPEL HILL 27514 919 967-5295

STANLEY, JOHN H., JR. R 065
2212 DELANEY AVE. A AC
WILMINGTON 28403 919 762-3882

STANLEY, RONALD JAY D 095
204 DOCTORS DRIVE A AC
BOONE 28607 704 264-4553

STANLEY, SHERBURN MOORE OM 011
ROUTE #1, BOX 5 A L/RT
TODD 28684 704 264-4274

STANTON, ALLIE MCLEOD GS 007
DRAWER 925 A L/RT
PLYMOUTH 27962 919 793-4125

STANTON, EDWARD SPIRES GS /TS 053
1816 DOCTORS DR. A AC
P. O. BOX 1169
SANFORD 27330 919 775-7146
FAX 919 774-7922

STAPLETON, SYDNEY SCOTT OPH 026
101 ROBESON ST., STE. 407 A P AC
FAYETTEVILLE 28301 919 483-2117
FAX 919 483-4225

STAREK, PETER JOSEF KARL TS /GS 032
UNC, CB 7065, BURNETT-WOMACK AC
DIV. OF CARDIO-SURGERY
CHAPEL HILL 27599 919 966-3381
FAX 919 966-3475

STARKENBURG, ROBERT J. IM 092
8301 WELLSLEY WAY AC
RALEIGH 27613 919 755-1111

STARLING, SUZANNE P. 000
108 NOTTINGHAM LANE R
EASLEY, SC 29640 803 855-4858

STARR, HENRY FRANK, JR. OM 041
3106 ALAMANCE RD. A RT
GREENSBORO 27407 919 299-4305

STAUB, ERNEST WILSON TS /VS 063
PINEHURST SURGICAL CLINIC A AC
PINEHURST 28374 919 295-0266
FAX 919 295-5740

STAVE, GREGG M. IM /OM 032
3434 LOCHN'ORA PARKWAY A P C
DURHAM 27705 919 493-5647

STEAD, EUGENE ANSON, JR. IM /CD 039
ROUTE #1, BOX 194 A P L
BULLOCK 27507 919 684-6587

STEAGALL, ROBERT WORTH, JR. D 060
6434 SARDIS ROAD A RT
CHARLOTTE 28270 704 364-1050

STEBBINS, NANCY K. G. P 032
#3 MEETINGHOUSE LANE A R
DURHAM 27707 919 493-8230

STEEL, JOHN GRIFFITH N 074
2501 STANTONSBURG RD. AC
GREENVILLE 27834 919 752-4848
FAX 919 752-0476

STEEL, MARILYN J. L. IM 074
1301 KINGSBROOK RD. A R
GREENVILLE 27858 919 551-4633

STEELE, RICHARD AUSTIN IM /CD 011
445 BILTMORE AVE. STE. 408 A AC
ASHEVILLE 28801 704 258-9083

STEELE, ROBERT GIBSON ORS 080
400 MOCKSVILLE AVENUE A AC
SALISBURY 28144 704 633-6442

STEELE, WALTER FRANKLIN GS /TS 012
VALDESE GENERAL HOSPITAL AC
VALDESE 28690 704 874-3160

STEFFEE, CRAIG HAROLD 034
1407-D SENECA ST. S
WINSTON-SALEM 27103 919 724-6703

STEFFES, BRUCE CARL GS 026
1790 METROMEDICAL DR. AC
FAYETTEVILLE 28304 919 323-2626

STEG, BRIAN DAVID CD /CD 018
230 18TH ST. CIRCLE SE AC
HICKORY 28602 704 324-4804

STEGALL, JOHN THOMAS FP 049
310 DAVIE AVENUE A L/RT
STATESVILLE 28677 704 873-3269

STEIGER, HOWARD PAUL D 060
BOX 2144 A L/RT
PAWLEYS ISLAND, SC 29585 803 237-4596

STEINBRUEGGE, JILL M. P 092
3120 HIGHWOODS BLVD. AC
RALEIGH 27604 919 878-9870

STEINFELD, JOHN ROBERT DR 011
P. O. BOX 2959 A AC
ASHEVILLE 28802 704 254-4617
FAX 704 252-8061

STEM, ERIC S. 032
48 CEDAR TERRACE RD. A S
CHAPEL HILL 27516

STENNETTE, DENISE S. 034
2075 QUEEN ST. S
WINSTON-SALEM 27103 919 722-7814

STEPHENS, FREEMAN IRBY IM 011
54 SUNSET PARKWAY A L/RT
ASHEVILLE 28801 704 253-8178

STEPHENS, JAMES EDWARD GP 020
P. O. BOX 516 A AC
ROBBINSVILLE 28771 704 479-3392

STEPHENS, KATHRYN JOHNSON OBG 060
1718 E. FOURTH ST. #201 A P AC
CHARLOTTE 28204 704 338-9752

STEPHENS, WAYLAND C. FP 034
280-B S. BROAD ST. AC
KERNERSVILLE 27284 919 768-9575

STEPHENSON, BENNETTE EDWARD GP 066
P. O. BOX 348 A L/RT
RICH SQUARE 27869 919 539-2343

STEPHENSON, HENRY LOUIS, JR. IM /CD 007
615 E. 12TH STREET AC
WASHINGTON 27889 919 946-2101

STEPHENSON, SHARON R. OBG 092
101 S. W. CARY PARKWAY #170 AC
CARY 27511 919 467-5941

STEPP, HESTLEY DANARD PD 029
200 ARTHUR DRIVE AC
THOMASVILLE 27360 919 475-2348

STERCHI, JOHN MICHAEL ON /GS 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4276

STETS, JOAN MARIE PS /GS 032
2609 N. DUKE ST. #612 AC
DURHAM 27704 919 471-3990

STEUTERMAN, MARY CHRISTINE PTH 041
1200 N. ELM ST. A AC
GREENSBORO 27401 919 379-4074

STEVENS, CLARK WM., JR. OBG 097
MEDICAL ARTS BLDG. AC
NORTH WILKESBORO 28659 919 667-4547

STEVENS, ELLIOTT WALKER, JR. PUD /AI 041
1018 N. ELM STREET A AC
GREENSBORO 27401 919 275-7238

STEVENS, HUGH L. C. IM /GE 044
601 GREEN VIEW DR. RT
WAYNESVILLE 28786 704 452-5124

STEVENS, JAMES ROMER FP 092
4643 MILL VILLAGE RD. C
RALEIGH 27612 703 671-9348

STEVENS, ROBERT BRUCE AN 018
3430 5TH ST. DRIVE, NW AC
HICKORY 28601 704 327-7443

STEVENSON, JOHN SAMUEL R /NM 077
926 BIGGS BOULEVARD A P AC
ROCKINGHAM 28379 919 997-2595

STEVENSON, KARL CHP /P 032
2609 N. DUKE ST., STE. 103 A AC
DURHAM 27704 919 220-5426

STEVENSON, ROBERT MCL. R 049
RT. #8, BOX 146 A AC
STATESVILLE 28677 704 872-4306

STEWART, ALBERT, JR. IM 026
114 BROADFOOT AVENUE A L
FAYETTEVILLE 28305 919 484-3365

STEWART, ANGELA GRACE PD 074
RT. #2, BOX 94-5C AC
WINTERVILLE 28590 919 355-3773

STEWART, BETTY G. P /N 011
PO BOX 1101 A AC
HIGHLAND HOSPITAL
ASHEVILLE 28802 704 254-3201

STEWART, DAVID DUBOSE IM 026
114 BROADFOOT AVE. * AC
FAYETTEVILLE 28305 919 484-1156

STEWART, FRANCIS ASBURY FP 090
102 E. MARSHVILLE BLVD. AC
MARSHVILLE 28103 704 624-5889

STEWART, GEORGE TERRY OBG 065
2215 CANTERWOOD DRIVE AC
WILMINGTON 28401 919 343-1031

STEWART, JIMMIE V. FP 087
RT. #1, BOX 378H A AC
SYLVA 28779 704 497-9163

STEWART, ROBERT BRUCE 032
BOX 3610,DUMC R
DURHAM 27710 919 684-8111

STEWART, ROBERT DOUGLAS IM /NTR 032
1901 HILLANDALE RD. AC
DURHAM 27705 919 383-0003

STEWART, RONALD CLEVELAND PS /HS 034
2901 MAPLEWOOD AVENUE AC
WINSTON-SALEM 27103 919 765-8620

STEWART, ROY ALLEN OPH 018
P. O. BOX 970 A L/RT
NEWTON 28658 704 464-1160

STEWART, SHAWN SCOTT N 040
606 N. ELM ST. A AC
HIGH POINT 27260 919 889-8877

STEWART, WILLIAM LEE PD 063
195 W. ILLINOIS AVE. A AC
SOUTHERN PINES 28387 919 692-2444

STIBAL, DARLENE MAY GS 084
303-C YADKIN ST. A AC
ALBEMARLE 28001 704 983-3500

STICKEL, DELFORD LEFEW GS 032
BOX 3917, DUMC A AC
DURHAM 27710 919 684-6129

STIDHAM, GREGORY ALAN FP 023
1198 WYKE RD. AC
SHELBY 28150 704 487-1148

STIEFEL, JOSEPH WALTER N 041
1910 N. CHURCH ST. A AC
GREENSBORO 27405 919 273-2511

STIEGEL, ROBERT MARK CDS /TS 060
1001 BLYTHE BLVD. #300 A AC
CHARLOTTE 28203 704 373-1500

STIENECKER, ROGER SCOTT 034
300 S. HAWTHORNE RD. R
WINSTON-SALEM 27103 919 748-2011

STILES, ALAN DAVIS NPM 032
UNC, DEPT. PED/NEONATOLOGY AC
CB 7220
CHAPEL HILL 27599 919 966-5063

STILL, JAMES GORDON PD 092
BOX 3675, DUMC AC
DURHAM 27710 919 477-4297

STINSON, CHARLES S. IM 049
PO BOX 1821 AC
STATESVILLE 28677 704 878-2011

STINSON, HELEN MARIE PS 041
1021 E. WENDOVER AVE. STE. 303 A M
GREENSBORO 27405 919 272-3169

STIRMAN, JERRY ARCHIBALD, JR. GS /TS 092
1101 DRESSER COURT AC
RALEIGH 27609 919 876-2010

STOCKDALE, WAYNE HARROP EM /GS 096
715 CRESCENT DR. L/RT
SMITHFIELD 27577 919 934-8348

STOCKS, LEWIS HENRY, III GS /TS 092
1101 DRESSER CT. AC
RALEIGH 27609 919 876-2010

STOCKS, ROSE MARY SUTTON OTO 000
3208 MORAN RD. A R
TAMPA, FL 33618

STOCKWELL, JANA A. PD /CC 032
605 MARSHALL WAY AC
DURHAM 27705 919 383-7745

STOKES, THOMAS ANGIER, JR. GYN 032
2609 N. DUKE ST., STE. 302 AC
DURHAM 27704 919 477-2183

STONE, BRADLEY ALLEN AN 011
445 BILTMORE AVE., STE. 105 AC
ASHEVILLE 28801 704 252-1016

STONE, BRIAN D. AI /PD 060
KAISER PERMANENTE C
2211-H EXECUTIVE ST.
CHARLOTTE 28208 704 394-0890

STONE, HARRY BENJAMIN, III OTO /A 025
709 PROFESSIONAL DR. A AC
PO BOX 2406
NEW BERN 28560 919 638-2666

STONE, PERRY GALE PD 034
DALTON ROAD, P. O. BOX 426 AC
KING 27021 919 983-2531

STONE, ROBERT THOMAS OTO 098
1704 S. TARBORO STREET A AC
WILSON 27893 919 291-7001

STONEBURNER, RICHARD GRESHAM GS 001
2729 BEDFORD ST. L/RT
BURLINGTON 27215 919 226-0400

STONEKING, HAL THOMAS GER /IM 041
1200 N. ELM ST. AC
GREENSBORO 27401 919 271-4812

STOODT, GEORJEAN PH /GPM 092
PO BOX 27687 * AC
NC DIV. OF ADULT HEALTH
RALEIGH 27611 919 733-7081

STOPFORD, WOODHALL OM /IM 032
BOX 2914, DUMC A AC
DURHAM 27710 919 286-3232

STORCH, SAMUEL JAY U 063
2 MEMORIAL DR. A AC
PINEHURST 28374 919 295-6782

STORY, LLOYD JERRELL IM /CD 034
HAWTHORNE MED. PL. #260 A AC
1901 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 768-4460

STORY, WILLIAM AUGUSTUS R /IM 023
201 GROVER STREET AC
SHELBY 28150 704 487-0003

STORY, WILLIAM ROBERT U 060
1012 KINGS DRIVE AC
CHARLOTTE 28283 704 334-6449

STOUT, CHARLES WALTER FP 076
1533 N. FAYETTEVILLE STREET AC
ASHEBORO 27203 919 672-0415

STOUT, THOMAS F. 074
2673 MULBERRY LN. A S
GREENVILLE 27858 919 355-5168

STOUT, WILLIAM ALLEN FP 024
P. O. BOX 675 A P AC
TABOR CITY 28463 919 653-2112

STOVALL, DALE WILLIAM OBG 032
UNC, DEPT. OF OB/GYN R
OLD CLINIC BLDG., CB 7570
CHAPEL HILL 27599 919 966-1390

STOVER, JOHN OLIVER, JR. DR /NM 064
P. O. BOX 42 AC
RED OAK 27868 919 443-8083

STOVER, PHILLIP E. FP 035
519 BICKETT BLVD. AC
LOUISBURG 27549 919 496-5774

STOWE, CLEVELAND OPH 060
9600 E. THIRD ST. AC
CHARLOTTE 28204 704 358-4135
FAX 704 358-4157

STOWE, FRED REECE, JR. N /CHN 026
3314 MELROSE RD., STE. 102 AC
FAYETTEVILLE 28304 919 484-7405

STRADER, EUGENE RAY FP 029
901 E. CENTER STREET AC
LEXINGTON 27292 704 249-1200

STRADER, HUNTER GORDON, JR. FP 029
2 CHERRY STREET AC
LEXINGTON 27292 704 249-9626

STRADER, KYLE WOODROW RHU /A 092
3831 MERTON DR. AC
RALEIGH 27609 919 781-9633

STRANG, PAUL JOSEPH FP /EM 042
102 CLEARFIELD CONDOS C
ROANOKE RAPIDS 27870

STRANGE, JOHN NELSON, JR. GS /VS 045
561 FLEMING ST. AC
HENDERSONVILLE 28739 704 693-1778

STRANGES, STEVEN M. NS 011
7 MCDOWELL ST. A AC
ASHEVILLE 28801 704 255-7778

STRASSER, STEPHAN F. DR 063
225 TALL TIMBERS DR. AC
PINEHURST 28374 919 295-4400

STRATAS, BYRON ARISTOTLE 065
1915 GLEN MEADE RD. A AC
WILMINGTON 28403 919 763-3601

STRATAS, NICHOLAS EMANUEL P /HYP 092
3900 BROWNING PL. #201 A * AC
RALEIGH 27609 919 787-7125

STRATTON, IDA JANICE DEAS PD /PH 032
414 E. MAIN ST. AC
DURHAM 27701 919 560-760

STRATTON, JAMES DAVID OPH 060
5150 SHARON ROAD A L/RT
CHARLOTTE 28210 704 554-717

STRATTON, JOHN PERLEY IM 032
5411 COLE MILL ROAD AC
DURHAM 27705 919 471-844

STRAUSBAUCH, PAUL HENRY PTH 074
DEPT. OF PATHOLOGY A P AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-280

STRAWCUTTER, HOWARD E. U /ADM 078
2002 N. ELM ST. A AC
LUMBERTON 28358 919 739-675

STRECK, CHRISTIAN JOHN GS 041
311 W. WENDOVER AVE. A AC
GREENSBORO 27408 919 275-841

STREET, MURDO EUGENE, JR. FP 063
P. O. BOX 38 A L/RT
GLENDON 27251 919 464-531

STREETER, CHARLES TRUMAN FP 036
222 WOODRIDGE DR. L/RT
BELMONT 28012 704 825-442

STREETER, GREGORY DEAN FP /DIA 067
200 DOCTOR'S DR. SUITE H AC
JACKSONVILLE 28546 919 353-056

STREETS, JULIA SINK IM 041
1511 WESTOVER TERR., STE. 108 A AC
GREENSBORO 27408 919 378-990

STRIBLING, MICHAEL DEAN U 050
28 RIVERVIEW ST., STE. 108 AC
FRANKLIN 28734 704 369-639

STRICKLAND, JAMES DONALD EM 007
PO BOX 464 A AC
BURLINGTON 27216 919 570-321

STRICKLAND, MYRON S. OBG 026
1219 WALTER REED RD. A AC
FAYETTEVILLE 28304 919 323-210

STRICKLAND, NIGEL JOHN DR 090
2700 MEDICAL OFFICE PLACE AC
GOLDSBORO 27530 919 734-186

STRICKLAND, WILLIAM HERMAN,JR. FP 045
510 FLEMING STREET AC
HENDERSONVILLE 28739 704 692-841

STRINGER, ARTHUR VERNON OBG 047
914 MONTICELLO ST. AC
GREENSBORO 27410 919 230-111

STRINGER, LLEWELLYN WINN PUD 034
1728 S. HAWTHORNE ROAD AC
WINSTON-SALEM 27103 919 765-751

STRINGFIELD, JAMES KING FP 044
331 BROWN AVE. L/RT
HAZELWOOD 28738

STRONG, JOHN ARTHUR 033
4528 AMERICAN DR. R
DURHAM 27705 919 383-202

STROUD, LARRY ASHLEY 034
610 SHOAL RUN TRAIL S
BIRMINGHAM, AL 35242

STROUPE, SAMUEL T. 034
2745 CROSSWINDS DR. A S
WINSTON-SALEM 27127 919 760-369

STUART, DENNIS O'GAREY FP 078
109 SHORT DR. A AC
LUMBERTON 28358 919 628-671

STUART, HAL MARTIN FP 081
180-C PARKWOOD DRIVE A AC
ELKIN 28621 919 835-361

STUBBS, ALLSTON JULIUS U 034
2932 LYNDHURST AVE. AC
WINSTON-SALEM 27103 919 765-402

STUBER, ROBERT LEO PTH /DMP 063
MOORE MEMORIAL HOSPITAL A AC
PINEHURST 28374 919 295-713

STUBER, SUSAN MARIE 000
309 HARBOR POINTE DR., #8 R
MOUNT PLEASANT, SC 29464

STUCKEY, CHARLES LEGRAND IM 060
2634 SHARON ROAD A L/RT
CHARLOTTE 28211 704 364-0905

STUCKEY, THOMAS DAVID IM /CD 041
520 N. ELAM AVE. A AC
GREENSBORO 27403 919 547-1700

STURBAUM, CHRISTOPHER W. 032
623 HIBBARD DR. A S
CHAPEL HILL 27514 919 933-5863

STURKIE, H. RAY GYN 034
1365 WESTGATE CENTER DR. AC
SUITE 1-C
WINSTON-SALEM 27103 919 768-8302

STUTESMAN, ANDREA A. PM 018
1877 N. CENTER ST. A AC
HICKORY 28601 704 322-1300
FAX 704 322-6030

STUTESMAN, JAMES L. PM 018
1877 N. CENTER ST. A AC
HICKORY 28601 704 322-1300
FAX 704 322-6030

STUTESMAN, MICHAEL STEVEN IM 012
341 E. PARKER RD. C
MORGANTON 28655 704 433-0225

STYRON, CHARLES WOODROW IM /DIA 092
615 ST. MARY'S STREET A * L
RALEIGH 27605 919 828-7773

SUBIN, DIANE CUSUMANO D 063
P.O. BOX 4078 A * AC
PINEHURST 28374 919 295-5567

SUBIN, GLEN DAVID ORS /HS 063
PO BOX 1650 A AC
PINEHURST 28374 919 295-5188

SUE, SAMUEL ARTHUR, JR. ORS 041
PO BOX 14580 A AC
315 W. WENDOVER AVE.
GREENSBORO 27415 919 275-0724

SUES, ANJALI MITTRA 032
5209 SMALLWOOD CT. A S
RALEIGH 27613 919 846-0949

SUGG, WILLIAM CASWELL, JR. IM /PUD 060
1001 BLYTHE BLVD., STE. 500 AC
CHARLOTTE 28203 704 355-5100

SUGG, WILLIAM CUNNINGHAM IM 034
7870 FAIR OAKS DR. A AC
PO BOX 38
CLEMMONS 27012 919 766-6401

SUGIOKA, KENNETH AN 032
319 BAYBERRY DR. A L/RT
CHAPEL HILL 27514 919 933-0487

SUH, PAUL BOKSUK ORS 032
UNC, 242 BURNETT-WOMACK BLDG. A AC
CHAPEL HILL 27599 919 966-3340

SUH, SANG HYON GS 012
P. O. BOX 266 A P AC
MORGANTON 28655 704 433-2235

SUITER, THOMAS B., JR. IM 064
100 S. TAYLOR ST. L/RT
ROCKY MOUNT 27804 919 443-9084

SULLIVAN, DANIEL CARL R /P 032
BOX 3808, DUMC A * AC
DURHAM 27710 919 684-2711

SULLIVAN, RAYMOND C.,JR. IM /AM 041
1511 WESTOVER TERRACE AC
GREENSBORO 27408 919 378-1461

SULLIVAN, ROBERT JOSEPH, JR. IM /FP 032
BOX 3003, DUMC A AC
DURHAM 27710 919 684-2248
FAX 919 684-8569

SULLIVAN, WILLIAM GREGORY GS 092
AHEC, WAKE COUNTY MED. CTR. A AC
3000 NEW BERN AVE.
RALEIGH 27610 919 250-8798

SUMMERLIN, ARTHUR ROGERS GYN 092
2800 BLUE RIDGE BLVD. #401 * AC
RALEIGH 27607 919 781-5504

SUMMERLIN, HARRY HOLLER, JR. FP 011
491 BILTMORE AVE. AC
ASHEVILLE 28801 704 258-0670

SUMMERLIN, ROBERT LEE FP 009
DUBLIN MEDICAL CLINIC A AC
PO BOX 10
DUBLIN 28332 919 862-3528

SUMMERS, CHRISTOPHER JAFFA 032
1119 HILLCREST DR. A S
CHAPEL HILL 27514 919 932-3372

SUMMERS, FRED DAVIDSON, JR. OBG 032
ROUTE #1, BOX 181 A RT
CHAPEL HILL 27514 919 929-2158

SUMNER, ROBERT GRIST IM /CD 013
68 LAKE CONCORD ROAD, N.E. A AC
CONCORD 28025 704 782-3135

SUMNER, THOMAS EDWARD PDR /PD 034
BOWMAN GRAY, DEPT. OF RAD. A * AC
WINSTON-SALEM 27103 919 748-4316

SUMPIO, BERNARDO D. EM /IM 082
209 FOX LAKE DRIVE A AC
CLINTON 28328 919 592-8847

SUMPTER, EDWIN ALLEN PD 074
DEPT. OF PEDIATRICS AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-3535

SUNDBERG, THOMAS CLARKE RHU 060
1335 ROMANY ROAD A P AC
CHARLOTTE 28204 704 375-1719

SUNDER, THEODORE RALPH CHN /N 074
DEPT. OF PEDICATRICS A AC
ECU SCHOOL OG MEDICINE
GREENVILLE 27858 919 551-2510

SUNDERMAN, MICHAEL ROBERT, SR. FP 098
P. O. BOX 310 A AC
STANTONSBURG 27883 919 238-2101

SUNG, JANE 032
BOX 2858, DUMC S
DURHAM 27710

SURAL, RONALD FRANK U 041
1006 PROFESSIONAL VILLAGE A P AC
GREENSBORO 27401 919 373-8323

SURFACE, LUTHER BROOKS 074
P-4 DOCTORS PARK APTS. A S
GREENVILLE 27834 919 758-8220

SURRATT, JOHN PEELER D 082
603 BEAMON ST. A AC
CLINTON 28328 919 592-5583

SURRATT, ROBERT WALTER IM 013
56 ARDSLEY AVENUE, N.E. AC
CONCORD 28025 704 782-1101

SUTHER, THOMAS CORNELIUS, JR. P /GP 063
MCCAIN HOSPITAL AC
MCCAIN 28361 919 944-2351

SUTHERLAND, SUZANNE P 032
1305-A ROSEDALE AVE. R
DURHAM 27707 919 493-5123

SUTTLE, EVELYN AMY PD 029
244 FAIRVIEW DRIVE AC
LEXINGTON 27292 704 246-4333

SUTTON, EDWARD COLMERY GYN 001
383 PORTSMOUTH CT. L/RT
BURLINGTON 27215 919 227-7446

SUTTON, HOMER GEORGE FP 034
3722 REYNOLDA ROAD AC
WINSTON-SALEM 27106 919 924-2900

SUTTON, JULIAN T. FP 064
DRAWER 100 AC
SCOTLAND NECK 27874 919 826-3143

SUTTON, STEVEN GLENN 074
107 PAUL CIRCLE S
GREENVILLE 27834 919 752-2322

SUTTON, WILLIAM WAYNE FP 031
337 N. NORWOOD STREET AC
WALLACE 28466 919 285-2111

SUVICK, MICHAEL ALFRED 074
Q-2 KINGSWOOD APTS. A S
CHAPEL HILL 27516 919 757-0514

SUVILLAGA, VICTOR IVAN FP /EM 065
5097 EDINBORO LN. A AC
WILMINGTON 28403 919 395-6273

SVARA, CLAUDIA J. RHU /IM 092
3320 WAKE FOREST RD. AC
RALEIGH 27609 919 878-0347

SVENSON, ROBERT HAROLD CD /IM 060
1001 BLYTHE BLVD. #300 A AC
CHARLOTTE 28203 704 373-1503

SWAIM, LINDIAN JOSEPH, JR. OBG 092
2500 BLUE RIDGE RD., STE. 219 A AC
RALEIGH 27607 919 782-9005

SWAN, ROBERT WM. 145 /ON 065
2131 S. 17TH ST. AC
WILMINGTON 28402 919 343-0161

SWANEY, PAUL EUGENE GS /VS 049
1726-C DAVIE AVE. AC
STATESVILLE 28677 704 872-0182

SWANSON, PAUL JOSEPH, JR. 074
E-8 DOCTOR'S PARK APTS. A * S
BEASLEY DR.
GREENVILLE 27834 919 830-0304

SWANTKOWSKI, THOMAS MARIAN IM /GE 063
205 PAGE RD. AC
PINEHURST MED. CLI.
PINEHURST 28374 919 295-5511

SWATHWOOD, TODD C. 034
240 S. SUNSET DR. S
WINSTON-SALEM 27103 919 722-8981

SWEEDE, SHARON SUE FP 011
1 PARKVIEW DR. AC
ASHEVILLE 28805 704 669-3460

SWEENEY, CHARLES LESLIE, JR. FP 092
613 SAMPSON ST. A RT
RALEIGH 27609 919 787-1261

SWEENEY, CHARLOTTE A. OBG/GYN 092
3400 EXECUTIVE DR.,STE. 203 A AC
RALEIGH 27609 919 954-7200

SWEET, RAYMOND C. NS 036
226 WILMOT DR. AC
GASTONIA 28054 704 864-1187

SWETENBURG, RAYMOND LEE, JR. PD 060
2711 RANDOLPH RD. STE. 501 P AC
EASTOVER PEDIATRICS
CHARLOTTE 28207 704 374-1736

SWIFT, MICHAEL RONALD IM 032
NCMH, CB #7250 AC
CHAPEL HILL 27599 919 966-2266

SWIFT, RONNIE GORMAN P 032
1004 MT. CARMEL CHURCH RD. AC
CHAPEL HILL 27514 919 933-5857

SWIRAT, THEODORE BEN IM 065
PO BOX 780 AC
WILMINGTON 28402 919 675-5333

SWOFFORD, JOEL HOWARD 097
57 GREENFIELD LANE A AC
WILKESBORO 28659 919 838-5761

SYDNOR, CHARLES FORD OPH 001
1214 VAUGHN ROAD * AC
BURLINGTON 27215 919 228-0254

SYKES, CHARLES LOUIS FP /IM 086
P. O. BOX 590 A L
MOUNT AIRY 27030 919 786-6105

SYKES, CHARLIE LOUIS, JR. IM 095
250 DOCTORS DRIVE AC
BOONE 28607 704 264-6362

SYPHER, ROBERT V., JR. HS /ORS 041
1103 N. ELM ST. A P AC
GREENSBORO 27401 919 378-0811

SZABO, JANET ROSE R 018
P. O. BOX 308 A AC
HICKORY 28603 704 322-2644

TABB, SETH EDWARD 032
7303-202 CALIBRE PARK DR. R
DURHAM 27705 919 966-2127

TABLER, JAN BISHOP PD 014
PO BOX 1258 AC
LENOIR 28645 704 758-5111

TABOR, CHARLES GORDON IM /EM 034
1360 PINEBLUFF ROAD A AC
WINSTON-SALEM 27103 919 765-9074
FAX 919 631-5090

TACKETT, AMOS DARRELL GS 065
1922 TRADD CT. A AC
WILMINGTON 28401 919 343-0811

TAEKMAN, JEFFREY M. 034
3556 HEATHROW DR. S
WINSTON-SALEM 27127 919 785-4520

TAFT, CHARLES VAN ORS 034
1425 PLAZA DR., BOX 25007 A AC
WINSTON-SALEM 27114 919 768-1270

TAFT, RICHARD CHESSON OBG 074
101 BETHESDA DRIVE A AC
GREENVILLE 27834 919 758-4181

TAFT, TIMOTHY NED ORS 032
UNC, CB 7055 A AC
237 BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-2039
FAX 919 966-6730

TAIT, JEFFREY FP 011
201 CHARLOTTE ST. AC
ASHEVILLE 28801 704 254-5470

TAJ-ELDIN, ADNAN IM /A 067
200 DOCTOR'S DR. STE. I AC
JACKSONVILLE 28546 919 353-6327

TALBERT, LUTHER MARCUS OBG /END 032
UNC, DEPT. OB OG/GYN,BOX 7570 AC
CHAPEL HILL 27599 919 966-5438

TALLEY, WENDY GAYLE 074
3288 COLONY CT. #610 A S
GREENVILLE 27834 919 758-6121

TALTON, DAVID SMITH 034
6811 OLD CANTON RD. APT. 4708 S
RIDGELAND, MISS 39157

TAMISIEA, J. RICHARD CD/IM 065
1202 MEDICAL CENTER DR. AC
WILMINGTON 28401 919 341-3301

TAN, RICARDO MIJARES GS /ABS 065
1402 ROBINHOOD RD. A RT
WILMINGTON 28401 919 762-7166

TANNEHILL, JOHN FRANKLIN OTO /HNS 044
120 HOSPITAL DRIVE AC
CLYDE 28721 704 452-1406

TANNEHILL, ROBERT BRUCE PD 080
720 GROVE STREET AC
SALISBURY 28144 704 636-5576

TANNEHILL, W. BRUCE 074
213 PINERIDGE DR. A S
GREENVILLE 27834 919 758-6973

TANNENBAUM, SIGMUND IAN U 041
408-A PARKWAY DR. A AC
GREENSBORO 27401 919 274-1114

TANNER, DAUNE DAUGHERTY EM 034
163 DEER RUN DR. AC
LEWISVILLE 27023 919 765-9328

TANNER, KENNETH SPENCER, JR. GS 081
PO BOX 468 A L/RT
RUTHERFORDTON 28139 704 286-9036

TANNER, TODD F. 032
321 W. UNIVERSITY DR. A S
CHAPEL HILL 27516 919 967-2682

TARA, CHARLES SAMUEL OPH 034
1702 S. HAWTHORNE ROAD AC
WINSTON-SALEM 27103 919 768-4140

TARDIF, CHRISTOPHER P. 000
7002 LEE PARK CT. R
FALLS CHURCH, VA 22042 202 994-5573

TARRY, WILLIAM BURWELL, JR. FP 039
104 NEW COLLEGE STREET L/RT
OXFORD 27565 919 693-8126

TART, DAVID E. D /IM 018
220 18TH ST. CIR., SE. * AC
HICKORY 28602 704 328-6185

TART, JAMES ALVIN IM /CD 063
PINEHURST MED. CLINIC AC
205 PAGE ROAD
PINEHURST 28374 919 295-5511

TART, JAMES MILTON, JR. GYN 060
MERCY SOUTH MED. CTR. P AC
10724 PARK RD.
CHARLOTTE 28210 704 542-0744
FAX 704 543-7713

TATE, ALLEN DENNY, JR. FP 001
1610 VAUGHN ROAD AC
BURLINGTON 27215 919 226-4471

TATE, DAVID ANDREW IM /CD 032
105 MARIN DR. AC
CHAPEL HILL 27516 919 966-5141

TATE, DAVID HARRISON PD 034
3175 MAPLEWOOD AVENUE A AC
WINSTON-SALEM 27103 919 768-7030

TATE, DENNY COOK IM 001
316 N. GRAHAM-HOPEDALE RD. A AC
BURLINGTON 27217 919 227-3621

TATE, GEORGE WHALEY, JR. OPH 063
2170 MIDLAND ROAD AC
SOUTHERN PINES 28387 919 295-2100
FAX 919 295-5339

TATE, MICHAEL NOAH ON 018
PO BOX 3710 AC
HICKORY 28603 704 324-9550

TATE, WILLIAM CUMMINGS, II GS 006
P. O. BOX 68 A P AC
BANNER ELK 28604 704 898-4221

TATUM, BEN SULLIVAN OBG 083
P. O. BOX 1599 A AC
LAURINBURG 28353 919 276-4432

TAUBER, STUART DAVIS END 011
29 RAVENSCROFT DRIVE AC
ASHEVILLE 28801 704 258-2404

TAYLOE, DAVID THOMAS PD 007
608 E. 12TH STREET * AC
WASHINGTON 27889 919 946-4134

TAYLOE, DAVID THOMAS, JR. PD 096
2706 MEDICAL OFFICE PLACE A P * AC
GOLDSBORO 27534 919 734-4736

TAYLOE, JOHN COTTEN, JR. ORS 025
P. O. DRAWER 2604 AC
NEW BERN 28560 919 633-1635

TAYLOE, JOSHUA OBG 007
614 E. 12TH STREET A P AC
WASHINGTON 27889 919 946-6544

TAYLOR, ALLEN R 074
EASTERN RADIOLOGISTS AC
#9 DOCTORS PARK
GREENVILLE 27834 919 752-5000

TAYLOR, BLUCHER EHRINGHAUS OBG 034
2909 LYNDHURST AVENUE A AC
WINSTON-SALEM 27103 919 765-5470

TAYLOR, BRITTON EDGAR OBG 065
2215 CANTERWOOD DRIVE AC
WILMINGTON 28401 919 343-1031

TAYLOR, FREDERICK HARVEY TS /CDS 060
1900 RANDOLPH RD.,#216 A AC
CHARLOTTE 28207 704 372-1306
FAX 704 372-3109

TAYLOR, JAMES EDWARD U 036
631 COX ROAD A AC
GASTONIA 28052 704 867-4896

TAYLOR, JAMES VAN, III FP 098
1704 S. TARBORO STREET A AC
WILSON 27893 919 291-7001

TAYLOR, JEFFREY SCOTT OPH 098
1704 S. TARBORO ST. A AC
WILSON 27893 919 291-7001

TAYLOR, JIMMY LYNN FP 090
1420 E. FRANKLIN ST. P AC
MONROE 28110 704 283-1521
FAX 704 283-5522

TAYLOR, JOHN BRUCE OBG 060
449 N. WENDOVER RD. AC
CHARLOTTE 28211 704 376-0360

TAYLOR, JULIAN RALEIGH FP 008
MEDICAL ARTS CENTER A AC
AHOSKIE 27910 919 332-3548

TAYLOR, MARSHALL CARNEY DR 007
630 E. 11TH ST. A AC
WASHINGTON 27889 919 946-2137

TAYLOR, MARY ANN HAMPTON FP 034
4450 GREEN MEADOWS AC
WINSTON-SALEM 27106 919 759-5218

TAYLOR, REID D. N 011
7 MCDOWELL ST. A AC
ASHEVILLE 28801 704 255-7776

TAYLOR, RICHARD ALLEN PD 090
1112 MARTHA DR. RT
MONROE 28112 704 283-1880

TAYLOR, RICHARD LEWIS FP 039
1018 COLLEGE STREET A P AC
OXFORD 27565 919 693-3972

TAYLOR, RUSSELL CARL IM /NEP 095
250 DOCTORS DRIVE AC
BOONE 28607 704 264-6362
FAX 704 265-4816

TAYLOR, SHAHANE RICHARDSON, JR OPH 041
348 N. ELM STREET A P AC
GREENSBORO 27401 919 274-4626

TAYLOR, THOMAS JEFFERSON GP 042
614 FRANKLIN ST. A L/RT
ROANOKE RAPIDS 27870

TAYLOR, THOMAS LEE DR 043
116 JONES DRIVE AC
DUNN 28334 919 892-7161

TAYLOR, VERNON WILLIAMS, JR. FP 086
815 N. BRIDGE STREET A L
ELKIN 28621 919 835-3425

TEAFORD, MICHAEL JACOB PTH 011
ST. JOSEPH'S HOSPITAL AC
ASHEVILLE 28801 704 255-3943

TEAGUE, RANDALL SCOTT DR /EM 076
837 OAKMONT DR. AC
ASHEBORO 27203 919 625-5151

TEAM, ROBERT ALSTON FP 029
2 CHERRY STREET AC
LEXINGTON 27292 704 246-4539

TEASLEY, BARRY HOYLE OPH 096
P. O. BOX 10907 AC
103 COX BLVD.
GOLDSBORO 27532 919 734-8440
FAX 919 734-9387

TEASLEY, MYRA LYNN OBG 092
4420 LAKE BOONE TR., STE. 303 AC
RALEIGH 27607 919 781-5510

TEETER, ROBERT TENNANT OBG 016
192474297 A AC
MOREHEAD CITY 28557 919 726-0107

TEETS, SHELLEE ANN 000
1540 GARDEN TERR., APT. 405 R
CHARLOTTE 28203 704 355-5651

TEGELER, DEBRA RENEE IM /ON 034
250 CHARLOIS BLVD. AC
WINSTON-SALEM 27103 919 768-4730

TEIGLAND, CHRIS M. U 060
1718 E. FOURTH ST. #608 A P AC
PRESBYTERIAN MEDICAL TOWER
CHARLOTTE 28204 704 358-0880

TEJANO, FELIPE MAZON U 054
KINSTON CLINIC,NORTH A P * AC
DOCTOR'S DRIVE
KINSTON 28501 919 527-3043

TELFER, JAMES GAVIN, JR. IM /FP 092
305 S. ACADEMY STREET AC
CARY 27511 919 467-7528

TEMPLE, PETER LIVERMORE FP 033
101 CLINIC DRIVE A AC
TARBORO 27886 919 823-2105

TEMPLE, RUFUS HENRY, JR. OBG 065
2215 CANTERWOOD DR. * AC
WILMINGTON 28401 919 343-1031

TEMPLETON, THOMAS BREVARD IM 049
309 VALLEY STREAM RD. AC
STATESVILLE 28677 704 872-3455

TENNANT, STANLEY NEAL CD 041
1011 PROFESSIONAL VILL. AC
GREENSBORO 27401 919 299-0111
FAX 919 271-9043

TENNEY, BARBARA LEA PD 098
200 RICHARDS ST. AC
WILSON 27893 919 399-2409

TENNEY, JAMES BERNARD GPM /PH 011
32 HOYT ROAD A AC
ARDEN 28704 704 255-5671
FAX 704 255-5452

TENNISON, MICHAEL BYRON CHN /PD 032
UNC SCHOOL OF MEDICINE A AC
751 BURNETT-WOMACK BLDG. 229-H
CHAPEL HILL 27599 919 966-2528

TEOT, LISA ANNE PTH 034
1049 MADISON AVE. A R
WINSTON-SALEM 27103 919 748-4311

TEPPER, JOEL RO 032
UNC SCHOOL OF MED. A AC
RADIATION ONCOLOGY, CB 7512
CHAPEL HILL 27599 919 966-7700
FAX 919 966-7681

TERRELL, SARA ELDORA HAWORTH IM 040
624 QUAKER LN. STE. 207-C A AC
HIGH POINT 27262 919 841-4233

TERRELL, THOMAS EUGENE IM 040
624 QUAKER LN., STE. 207-C AC
HIGH POINT 27262 919 885-3211

TERRY, RONALD LYNN TR 011
200 DOCTOR'S BLDG. A AC
ASHEVILLE 28801 704 255-4100
FAX 704 255-4091

TESTER, RICHARD DEAN R /NM 040
P. O. BOX 5007 A AC
HIGH POINT 27262 919 883-6716

TEW, DOUGLAS MICHAEL IM 054
3527 WESTOVER RD. R
ORANGE PARK, FL 32073

THACKER, ROBERT KELLER FP 041
603 DOLLY MADISON RD. AC
GREENSBORO 27410 919 294-6190

THALINGER, ALAN ROBERT ON /IM 060
3535 RANDOLPH ROAD A AC
CHARLOTTE 28211 704 365-0760

THARRINGTON, CHRISTOPHER L. 032
4-6 POST OAK S
DURHAM 27705 919 684-6265

THEL, MARK CHARLES 032
910 CONSTITUTION DR. APT. 906 A R
DURHAM 27705 919 684-8111

THELAN, KENNETH MACLACHLAN IM 067
1101 WESTMORELAND C
JACKSONVILLE 28540 919 455-8548

THELAN, VIRGINIA BLEVINS IM 067
1101 WESTMORELAND DR. C
JACKSONVILLE 28540 919 768-4730

THIELE, RONALD LEWIS PD /PH 074
503 QUEEN ANNE'S ROAD A AC
GREENVILLE 27858 919 756-6721

THIELMAN, NATHAN M. 032
813 LOUISE CIRCLE S
DURHAM 27705 919 383-7118

THIELMAN, SAMUEL B. P /GER 011
29 RAVENSCROFT DR. A AC
ASHEVILLE 28801 704 253-9472

THIGPEN, FRONIS RAY FP /PD 024
805 S. MADISON STREET AC
WHITEVILLE 28472 704 642-6121

THOMAS, BEN DAVID FP 092
PO BOX 218 A L
ZEBULON 27597 919 269-9111

THOMAS, CATHY WALL AN 032
PO BOX 15609 C
DURHAM 27704 919 470-6186

THOMAS, CHARLES CARROLL, II TR /RO 011
445 BILTMORE AVE., STE. G-109 A AC
ASHEVILLE 28801 704 253-7077
FAX 704 253-6898

THOMAS, COLIN EDWARD U 045
512 SIXTH AVENUE, WEST A AC
HENDERSONVILLE 28739 704 692-6262

THOMAS, COLIN GORDON, JR GS 032
UNC,BURNETT-WOMACK 229H L
CHAPEL HILL 27599 919 966-4597

THOMAS, DAVID BRIAN
101 MANNING DR. R
CHAPEL HILL 27514

THOMAS, EDWIN SCOTT IM 092
106 E. PARK ST. AC
CARY 27511 919 467-8168

THOMAS, FRANCIS THORNTON TS /GS 074
DEPT. OF SURGERY A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2620

THOMAS, HAROLD ANDREW, JR. IM /EM 034
300 S. HAWTHORNE RD. C
WINSTON-SALEM 27103 919 748-4626

THOMAS, HENRY FULLER GS /VS 036
902-G COX ROAD A AC
GASTONIA 28054 704 864-7821

THOMAS, JAMES JOSEPH PD 012
100 MEDICAL HEIGHTS DR. A AC
MORGANTON 28655 704 433-4484

THOMAS, JAMES M. GS 026
1790 METROMEDICAL DR. AC
FAYETTEVILLE 28304 919 323-2626

THOMAS, JOSEPH RAKER ORS 082
603 BEAMAN ST. AC
CLINTON 28328 919 592-1233

THOMAS, MICHAEL BEMAN FP 065
1908 MEETING COURT AC
WILMINGTON 28401 919 762-1515

THOMAS, ROSEMARY ANN CD /IM 074
2000 VENTURE TOWER DR. AC
GREENVILLE 27834 919 757-3266

THOMAS, RUFUS M., JR. D 044
108 HOSPITAL DRIVE AC
CLYDE 28721 704 456-7343

THOMAS, TERISA ANN 074
RT. #16, BOX 170 A S
GREENVILLE 27858 919 756-8892

THOMAS, WILLIAM RALPH GP 070
1801 DARSAN DR. L/RT
ELIZABETH CITY 27909 919 338-2480

THOMASON, HENRY CLAYTON, JR. CD /IM 036
1021 X-RAY DR. A AC
GASTONIA 28054 704 867-2341
FAX 704 868-2666

THOMASON, ROBERT BRADLEY,III GS /VS 034
2023 ELIZABETH AVE. A C
WINSTON-SALEM 27103 919 765-5221

THOMLEY, ALAN MILES CD /IM 060
1001 BLYTHE BLVD. #300 A AC
CHARLOTTE 28203 704 373-1503

THOMPSON, BENJAMIN EVERETT,JR. GP 092
301 S. ACADEMY STREET AC
CARY 27511 919 467-9961

THOMPSON, FRANK ALAN GE /IM 011
W-18 DOCTORS BLDG. AC
ASHEVILLE 28801 704 252-2904

THOMPSON, FREDERICK A. IM /CD 014
505 HIGHLAND AVE. SW L/RT
LENOIR 28645 704 758-5544

THOMPSON, GEORGE R. C. FP 065
730 ROBERT E. LEE DR. A * L/RT
WILMINGTON 28412 919 452-1270

THOMPSON, JAMES NICHOLAS OTO /PSF 034
BOWMAN GRAY-SURGERY A * AC
WINSTON-SALEM 27103 919 748-4161

THOMPSON, JAMES STEVENS ORS /HS 011
20 MCDOWELL ST. A AC
ASHEVILLE 28801 704 253-7521

THOMPSON, JOHN ALBERT, JR. D 060
2310 RANDOLPH ROAD A AC
CHARLOTTE 28207 704 376-9849

THOMPSON, KENNETH COCHRAN P 033
106 NASH MEDICAL ARTS MALL AC
ROCKY MOUNT 27801 919 443-8002

THOMPSON, LAWRENCE KESLAR, III PS 032
2609 N. DUKE ST., STE. 401 AC
DURHAM 27704 919 471-2502

THOMPSON, MARVIN WHITAKER PTH 078
P. O. BOX 847 A P * AC
LUMBERTON 28359 919 671-5074

THOMPSON, NEAL THORNTON IM 065
1928 S. 16TH ST. A AC
WILMINGTON 28401 919 762-5292

THOMPSON, OTIS RICHARD, JR. IM /CD 014
322 MULBERRY ST., SW AC
PO BOX 1020
LENOIR 28645 704 758-5544

THOMPSON, RICKY ALAN 032
2116 SNOWCREST TRAIL R
DURHAM 27707 919 489-6957

THOMPSON, WILLARD C.,III IM 080
116 RUTHERFORD ST. A P AC
SALISBURY 28144 704 633-2732

THOMPSON, WILLARD RAY OTO 080
102 MOCKSVILLE AVENUE A P AC
SALISBURY 28144 704 637-3344

THOMPSON, WILLIAM CECIL, III FP /GER 018
210 13TH AVE. PL., NW AC
HICKORY 28601 704 322-7170

THOMPSON, WILLIAM KEITH PD 029
200 ARTHUR DRIVE AC
THOMASVILLE 27360 919 475-2348

THOMPSON, WINFIELD LYNN GS 096
216 S. HILLCREST DRIVE A L/RT
GOLDSBORO 27540 919 734-2610

THOMPSON,WILLARD CHANDLER,JR. GS 060
3535 RANDOLPH RD., 201-W A AC
CHARLOTTE 28211 704 364-8100
FAX 704 365-2073

THORESEN, F. D. EM /FP 045
1801 ASHEVILLE HIGHWAY AC
HENDERSONVILLE 28739 704 696-0545

THORNE, EDWARD YOUNG COX PD 098
1700 S. TARBORO ST. A RT
WILSON 27893 919 399-2200

THORNE, NORMAN ALAN P /R 011
215 OLD TOLL RD. A AC
ASHEVILLE 28804 704 258-2804

THORNHILL, EDWIN HALE OTO /OPH 092
720 W. JONES STREET A L
RALEIGH 27603 919 834-7341

THORNHILL, GEORGE TUDOR OPH 092
720 W. JONES STREET L
RALEIGH 27603 919 834-7341

THORNTON, JACK WALKER OTO /HNS 018
P. O. DRAWER 2484 AC
HICKORY 28603 704 322-3725

THORNTON, WILLIAM COOPER, JR. IM 076
550 WHITE OAK STREET AC
ASHEBORO 27203 919 625-3218

THORP, JAMES HORACE MERRIAM OBG 064
200 NASH MEDICAL ARTS MALL A * AC
ROCKY MOUNT 27804 919 443-5941

THORP, LEWIS SUMNER FP /FP 064
100 MEDICAL ARTS MALL AC
ROCKY MOUNT 27801 919 443-9084

THORWARTH, WILLIAM T.,JR. DR /NM 018
CATAWBA RADIOLOGICAL ASSOC. A AC
P. O. BOX 308
HICKORY 28603 704 322-2871

THRASH, WILLIAM VIRGIL IM 011
147 ASHELAND AVENUE A AC
ASHEVILLE 28801 704 258-1188

THULLEN, JAMES DONALD PD /NPM 092
2311 LAKE DRIVE AC
RALEIGH 27609 919 755-8545

THURBER, DAVID CUSHMAN, JR. IM 092
3100 DURALEIGH RD. AC
RALEIGH 27612 919 733-5157

THURMAN, ROGER ZALON GS 098
1700 S. TARBORO ST. A AC
WILSON 27893 919 399-2200

THURSTON, THOMAS GARDINER, II R /NM 080
P.O. DRAWER 2608 L
SALISBURY 28144 704 636-0848

THURSTON, THOMAS GARDINER, III OBG 080
315 MOCKSVILLE AVENUE A AC
SALISBURY 28144 704 636-9270

TICKLE, DEWEY REID R 098
WILSON MEMORIAL HOSPITAL A AC
WILSON 27893 919 399-8112

TIDLER, JAMES IM 065
1919 S. SIXTEENTH STREET A L
WILMINGTON 28401 919 763-8184

TIDWELL, JOHN WILLIAM, II OBG 060
2801 RANDOLPH RD., STE. 200 A AC
CHARLOTTE 28211 704 377-5675

TIEDEMAN, JAMES STUART OPH 032
BOX 3802, DUMC A AC
DURHAM 27710 919 684-3090
FAX 919 684-2230

TILLETT, CHARLES WALTER, JR. OPH 060
2130 SHARON LANE A L/RT
CHARLOTTE 28211 704 366-6895

TILLETT, GRACE MONTANA OPH /R 060
2130 SHARON LANE L/RT
CHARLOTTE 28211 704 366-6895

TILLEY, PAUL DONALD GP 014
P. O. BOX 5607 AC
LENOIR 28645 704 758-2368

TILLEY, WILLIAM SPENCER, JR. CD 041
1011 PROFESSIONAL VILL. AC
GREENSBORO 27401 919 299-0111

TILSON, HUGH H. GPM /PH 092
3030 CORNWALLIS RD. A P AC
ESP DIV. BURROUGHS WELLCOME
RESEARCH TRIANGLE PK 27709 919 248-4354

TIMBERLAKE, ROBERTS E., JR. PD 029
8 MEDICAL PARK DR. AC
LEXINGTON 27292 919 249-4911

TIMERDING, BEVERLY L. EM 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-4625

TIMMIS, HILARY HOUGHTON 032
114A HIGH ST. A S
CARRBORO 27510 919 942-2065

TIMMONS, ROBERT LANSING NS 074
2325 STANTONSBURG RD. A P AC
GREENVILLE 27834 919 752-5156

TINGA, JOHN HINNES OBG 025
903 PINE TREE DRIVE A AC
NEW BERN 28560 919 633-4005

TINGELSTAD, JON BUNDE PD /PDC 074
DEPT. OF PEDIATRICS A * AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2540
FAX 919 551-3292

TINSLEY, ELLIS A., JR. GS 032
5905 TAHOE DR. R
DURHAM 27713 919 966-4131

TINSLEY, ELLIS ALLAN, SR. GS /TS 065
1414 MEDICAL CENTER DRIVE A AC
WILMINGTON 28401 919 763-7363

TIPTON, WM. WAKEFIELD GS /VS 074
905 JOHNS HOPKINS BLVD. AC
GREENVILLE 27834 919 758-1747
FAX 919 758-6809

TITUS, ANTHONY F. 060
7810 PROVIDENCE RD., STE. 102 AC
CHARLOTTE 28226 704 543-6636

TODD, KAREN GROSSMANN 074
3204 MEETING PL. S
GREENVILLE 27858 919 756-7333

TODD, STUART KITTREDGE GS 064
100 NASH MEDICAL ARTS MALL A P AC
ROCKY MOUNT 27801 919 443-9084

TODD, TIMOTHY ANDREW GP 078
123 N. SECOND ST. AC
ST. PAULS 28384 919 865-5114

TOFFOLO, RUDOLF RONALD R 023
120 GOLD RUN CT. A AC
KINGS MOUNTAIN 28086 704 739-3712

TOLBERT, FRANKLIN LEE FP 034
PO BOX 666 AC
MOCKSVILLE 27028 919 634-6128

TOLER, WILLIAM RICHARD ALD /FP 060
3524 COLONY RD. #B AC
CHARLOTTE 28211 704 376-7546

TOLLEY, AUBREY GRANVILLE P 032
110 LAUREL HILL ROAD L/RT
CHAPEL HILL 27514 919 942-5754

TOLLIVER, JAMES BERT FP 029
510-A TURNER STREET AC
THOMASVILLE 27360 919 475-9171

TOLMIE, JOHN DUNCAN AN /ADM 034
1543 ABBEY COURT A AC
WINSTON-SALEM 27103 919 748-4524

TOLNITCH, LISA ANNE GS 092
3410 EXECUTIVE DR., STE. 203 A AC
RALEIGH 27609 919 790-8055

TOLSON, ROGER JOHN IM 070
1134 N. ROAD STREET AC
ELIZABETH CITY 27909 919 335-2963

TOLSON, TIMOTHY ALEXANDER 074
28 BIRCHWOOD SANDS ESTATES S
GREENVILLE 27834 919 758-3155

TOMBERLIN, KENNETH GUY ORS 034
2925 BRIGHAM STREET A AC
WINSTON-SALEM 27103 919 765-9314
FAX 919 765-9313

TOMLIN, EDWIN MERRILL U 013
102 LAKE CONCORD ROAD, N.E. A AC
CONCORD 28025 704 786-5131

TOMSICK, ROBERT S. D 032
UNC, DEPT. OF DERMATOLOGY A AC
CHAPEL HILL 27599 919 966-4506
FAX 919 966-3921

TOMSYCK, REBECCA R. P /CHP 060
1900-918 RANDOLPH RD. A AC
CHARLOTTE 28207 704 333-7722

TOOHEY, ANNE KATHLEEN RHU /IM 032
4205 BEN FRANKLIN BLVD. A AC
PO BOX 16999
DURHAM 27704 919 477-6900

TOOLE, JAMES FRANCIS N /IM 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4101
FAX 919 748-5477

TOOTHMAN, DONALD E. R 060
5101 ROSEWATER CT. AC
CHARLOTTE 28226 704 384-4056

TOPE, WHITNEY DAVISON 032
1500 DUKE UNIVERSITY RD. #M3B R
DURHAM 27701 919 684-2291

TOPPLE, STANLEY CRAIG ORS 059
PRESBYTERIAN HOSP., P.O. BOX 45 H
KIKUYU, KENYA

TORRES-HECKER, LUZVIMINDA IM 091
542 W. RIDGEWAY ST. AC
WARRENTON 27589 919 257-3141

TORREY, RICHARD KENDRICK FP 098
THE MIDDLESEX CLINIC A AC
P. O. BOX 100
MIDDLESEX 27557 919 235-4078
FAX 919 235-3027

TORTORA, FRANK L.,JR. U 092
101 S. W. CARY PARKWAY AC
CARY 27511 919 467-3203

TOSKY, GEORGE MICHAEL OBG 092
2800 BLUE RIDGE BLVD. #206 AC
RALEIGH 27607 919 781-7450

TOUSSAINT, JAMES LYNN IM /GE 060
2015 RANDOLPH RD., STE. 208 A AC
CHARLOTTE 28207 704 377-4009

TOVE, NANCY LOUISE FP 092
101 S.W. CARY PKWY. STE. 60 AC
CARY 27511 919 469-5072

TOWARNICKY, MICHAEL R. IM /NM 025
PO BOX 68 A AC
POLLOCKSVILLE 28573 919 633-1010

TOWNSEND, MURPHY FURMAN, JR. IM 041
301 E. WENDOVER AVE., STE. 300 A P AC
GREENSBORO 27401 919 272-2141

TOWNSEND, ROBERT GLENN, JR. FP 047
405 S. MAIN ST. A P * AC
PO BOX 665
RAEFORD 28376 919 875-5101

†TRACHTENBERG, WILLIAM GP 096
239 S. HILLCREST DRIVE A
DECEASED--11-12-90
GOLDSBORO 27530 919 734-0956

TRACY, JOHN WILLIAM FP 060
1618 E. MOREHEAD ST. AC
CHARLOTTE 28207 704 377-3610

TRACY, STEVEN LYNN PTH 036
DEPT. OF PATHOLOGY AC
GASTON MEMORIAL HOSPITAL
GASTONIA 28052 704 866-2851

TRADO, CHARLES ELEMENDORF P /GP 018
MEDICAL ARTS BLDG. A P AC
24 SECOND AVE. NE
HICKORY 28601 704 324-9900

TRAHEY, THOMAS F., III CD 013
920 CHURCH STREET NORTH A AC
CABARRUS MEM. HOSPITAL
CONCORD 28025 704 788-5939
FAX 704 788-5957

TRAMM, JEANNE NORGAARD AN 011
MEMORIAL MISSION HOSP. AC
ASHEVILLE 28801 704 254-1969

TRAN, LUCAS VAN N 026
101 ROBESON ST., STE. 304 A P AC
FAYETTEVILLE 28301 919 323-1016

TRAN, VAN PIERRE 032
17 BALMORAY COURT, APT. 21 A R
DURHAM 27707 919 684-8111

TRANT, CHARLES AMON, JR. 032
128 SHADY SPRING PL. A R
DURHAM 27705 919 489-0175

TRASK, ELIZABETH JETER 011
445 BILTMORE CTR., ST. 105 A AC
ASHEVILLE 28801

TRATHEN, WILLIAM THOMAS OBG 095
20 DOCTORS PARK AC
BOONE 28607 704 264-1232

TRAYLOR, HENRY WILLIAM, JR. IM /EM 024
903 E. JEFFERSON ST. AC
WHITEVILLE 28472 919 642-6121

TREADWELL, EDWARD LOUIS RHU /IM 074
DEPT. OF MEDICINE A * AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2533
FAX 919 551-2012

TREANOR, RITA ELIZABETH 032
RT. #6, BOX 376 S
FARRINGTON RD.
CHAPEL HILL 27514 919 942-8706

TREMONT, STEPHEN J. ON /HEM 092
PO BOX 30098 A AC
RALEIGH 27622 919 781-7070

TREVATHAN, G. EARL, JR. PD 074
AMBULATORY PED. SECT. A * AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2535

TRIBBLE, REID WARREN GS 034
2240 ELIZABETH AVE. R
WINSTON-SALEM 27103 919 748-2011

TRIPLETT, PATRICIA FOWLER 032
6 ICON CT. A S
DURHAM 27703 919 596-8207

TRIPP, ELIZABETH LOUISE 074
D-8 DOCTOR'S PARK A S
GREENVILLE 27834 919 757-1294

TRIPP, MICHAEL DAVID R 074
307 KENILWORTH DR. A AC
GREENVILLE 27834 919 884-6037

TRITICO, ROCCO JOSEPH DR 049
P. O. BOX 803 A AC
STATESVILLE 28677 704 872-6122

TROOST, B. TODD N /OPH 034
300 S. HAWTHORNE RD. A AC
DEPT. OF NEUROLOGY
WINSTON-SALEM 27103 919 748-4643

TROUGHT, WILLIAM STANLEY DR 074
19 BAYWOOD DRIVE AC
WINTERVILLE 28590 919 752-5000
FAX 919 752-0166

TROUTMAN, BAXTER SUTTLES GP 014
521 MT. VIEW ST., SW A L/RT
LENOIR 28645

TROUTMAN, BELK CONNOR GP 054
P. O. BOX 429 AC
GRIFTON 28530 919 524-4273

TROWELL, AMY REBECCA PD /PHO 034
250 CHARLOIS BOULEVARD AC
WINSTON-SALEM 27103 919 768-4730

TROXELL, MARCUS LEE IM /ON 060
2015 RANDOLPH RD., STE. 210 C
CHARLOTTE 28211 704 358-1900

TROXLER, DAVID HAYS PUD 011
30 CHOCTAW ST. A AC
ASHEVILLE 28801 704 255-7733

TROXLER, EULYSS ROBERT ORS 041
2314 PRINCESS ANN ST. A L
GREENSBORO 27408 919 288-5521

TRUED, SALLY J. EM 032
NC MEMORIAL HOSP STE. 1015 AC
CHAPEL HILL 27599 919 966-5933

TRUESDALE, GERALD LYNN PS /GS 041
901 N. ELM ST. AC
GREENSBORO 27401 919 274-2757

TRUJILLO, JAIME EMILIO IM /END 034
2928 MAPLEWOOD AVE. #B AC
WINSTON-SALEM 27103 919 768-0496
FAX 919 768-0498

TRULUCK, THOMAS BRIAN OBG 025
903 PINE TREE DRIVE AC
NEW BERN 28560 919 633-4005

TRUSCOTT, BASIL LIONEL N /IM 034
1244 ARBOR RD., #449 L/RT
WINSTON-SALEM 27104 919 725-4441

TRUSLOW, ROY EARL R 079
1706 PENNROSE DR. A L/RT
REIDSVILLE 27320 919 349-5952

TRYON, RANDY JOE FP 045
2305 ASHEVILLE HIGHWAY AC
HENDERSONVILLE 28739 704 692-7122

TSAI, GEORGE SHOU-CHYUAN GP 060
P. O. BOX 430 AC
INDIAN TRAIL 28079 704 821-7056

TSAO-WU, GLADYS SHI 034
2323-D WINSTON COURT A S
WINSTON-SALEM 27103 919 724-6634

TSE, ALEX YU CHOW PD /A 067
120 MEMORIAL DRIVE A AC
JACKSONVILLE 28540 919 353-0581

TSE, ANDRE KON SANG IM /CD 067
158 MEMORIAL COURT A AC
JACKSONVILLE 28540 919 353-5111

TUCKER, DONALD HUGH IM /CD 074
1705 W. SIXTH STREET AC
GREENVILLE 27834 919 752-6101
FAX 919 752-7781

TUCKER, GEORGE FRANKLIN FP 092
PO BOX 99 L/RT
ZEBULON 27597 919 269-9144

TUCKER, GEORGE REGINALD, JR. FP 091
RUIN CREEK RD. STE. A AC
HENDERSON 27536 919 492-3152

TUCKER, LANDRUM S. JR. PYA/CHP 032
FRANKLIN SQUARE, BLDG 900-A AC
CHAPEL HILL 27514 919 942-8716

TUCKER, M. SUSAN U 032
UNC, 428 BURNETT-WOMACK AC
CB #7235
CHAPEL HILL 27599 919 966-1744
FAX 919 966-6923

TUCKER, PAUL CHAMBLISS, JR. GE /IM 060
NALLE CLINIC AC
1350 S. KINGS DR.
CHARLOTTE 28207 704 372-8750
FAX 704 332-7020

TUCKER, PETER LOREN PS 060
421 N. WENDOVER RD. A AC
CHARLOTTE 28211 704 365-8255

TUCKER, SCOTT L. PS /HS 034
175 CHARLOIS BLVD., STE 102 AC
WINSTON-SALEM 27103 919 760-1727

TUCKER, WILLIAM BEVERLY FP 091
RUIN CREEK ROAD AC
HENDERSON 27536 919 492-3152
FAX 919 430-1928

TUCKER, WILLIAM STUART, JR. END /IM 060
1350 S. KINGS DR. AC
CHARLOTTE 28207 704 342-8000
FAX 704 332-7020

TUCKER, WILLIAM YORK, JR. CDS /TS 034
300 S. HAWTHORNE ROAD AC
WINSTON-SALEM 27103 919 748-4487
FAX 919 748-4204

TUGGLE, ALLAN DAVIS R 060
2335 FOREST DRIVE A L/RT
CHARLOTTE 28211 704 366-4089

TUNSTALL, DENISE P. 034
434 S. FACTORY ROW S
WINSTON-SALEM 27101 919 721-4729

TURK, ROBERT SPENCER GS 011
3-D DOCTORS PARK A AC
ASHEVILLE 28801 704 258-8206
FAX 704 258-8233

TURLINGTON, WADE ROBERT FP 067
200 DOCTOR'S DRIVE, SUITE M A AC
JACKSONVILLE 28540 919 353-8100

TURLINGTON, WILLIAM T., IV 032
302-A MASON FARM RD. S
CHAPEL HILL 27514 919 933-6748

TURNBULL, JOSEPH TAYLOR FP 059
W. THOMASON STREET AC
OLD FORT 28762 704 668-7694

TURNER, CHARLES SIEWERS PDS 034
2819 FOREST DRIVE A AC
WINSTON-SALEM 27104 919 724-0345

TURNER, HENRY CATLETT AN 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4791

TURNER, LARRY OPH /OTO 032
1110 W. MAIN STREET A L
DURHAM 27701 919 682-9341

TURNER, MURRAY WELLS IM /NEP 060
928 BAXTER STREET A AC
CHARLOTTE 28204 704 338-6300

TURNER, ROBERT COY IM 074
DEPT. OF MEDICINE AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4633

TURNER, WILLIAM BOMAR, III U 096
2400 WAYNE MEM. DR. A AC
GOLDSBORO 27530 919 735-1635

TURNER, WILLIAM HARRISON, III D /IM 041
1030 PROFESSIONAL VILLAGE A AC
GREENSBORO 27401 919 373-1384

TURRENTINE, JOHN E. OBG 086
180-R PARKWOOD DR. AC
ELKIN 28621 704 526-2229
FAX 919 526-3061

TUTTLE, JOHN CLOYD FP 013
117 S. MAIN ST. AC
KANNAPOLIS 28081 704 932-7016

TUTTLE, MARLER SLATE, SR. FP 013
117 S. MAIN STREET A L
KANNAPOLIS 28081 704 932-7016

TWEED, JOHN LINDSEY 032
119 W. TRINITY AVE. R
DURHAM 27701 919 688-0527

TWISELTON, LOUISE ANN 074
1133 TREYBROOKE CIR. A S
GREENVILLE 27834 919 758-8996

TYE, JOHN GAROLD OPH 014
659 PENNTON AVE. A AC
LENOIR 28645 704 754-0561

TYLER, MICHAEL JOSEPH FP /ALD 053
RT. #6, BOX 7 AC
PITTSBORO 27312 919 542-2731

TYLER, RICHARD LYNN FP 012
PO BOX 869 AC
GLEN ALPINE 28628 704 584-2481

TYNDALL, HUBERT DURWOOD GP 096
2400 WAYNE MEMORIAL DRIVE AC
GOLDSBORO 27530 919 734-4845

TYNER, HUGH EDWARD GS /TS 036
2562 PINEWOOD RD. L/RT
GASTONIA 28054 704 864-7821

TYNER, MICHAEL ANTHONY GS 091
1912 RUIN CREEK RD. A AC
HENDERSON 27536 919 438-2070

TYREE, LARRY ALLEN FP 092
1109 DRESSER COURT AC
RALEIGH 27609 919 872-4900

TYROLER, JAY CARY IM 060
7108 PINEVILLE-MATTHEWS RD. AC
CHARLOTTE 28226 704 542-1952

TYSINGER, JOHN REED CD /IM 041
1511 WESTOVER TERRACE AC
GREENSBORO 27408 919 373-1562

TYSON, JAMES WILLIAM FP 088
NEWLAND MEDICAL BUILDING AC
BREVARD 28712 704 884-9030

TYSON, SAMUEL LESTER OPH 041
300 W. NORTHWOOD ST. AC
GREENSBORO 27401 919 275-5673

TYSON, TREVA WATKINS 032
103 MILLROCK CT. R
CARRBORO 27510 919 966-4131

UELAND, FREDERICK R. 034
120 E. MAIN ST. #1710 S
LEXINGTON, KY 40507

UGLAND, DAVID NELS OPH 060
100 QUEENS RD. A P AC
CHARLOTTE 28204 704 332-1156
FAX 704 334-7686

UHLAN, JANET LEE FP 090
808 CIRCLE DR. C
MONROE 28112

UHLIN, STEPHEN RICHARD D /IM 040
624 QUAKER LANE, 302-B A AC
HIGH POINT 27262 919 885-8333

ULLRICH, CHRISTOPHER GEORGE NR 060
CHARLOTTE RADIOLOGY A P AC
PO BOX 36937
CHARLOTTE 28236 704 365-0343

UM, KI-BONG GP 007
P. O. BOX 625 AC
ROBERSONVILLE 27871 919 795-4192

UMPHLET, THOMAS LEONARD IM 092
2519 WHITE OAK ROAD A L/RT
RALEIGH 27609 919 787-9650

UNDERHILL, THOMAS EDWARD 034
201 PENNSYLVANIA AVE. A S
WINSTON-SALEM 27104 919 765-3639

UNDERHILL, THURLOW REED U 025
800 HOSPITAL DRIVE, STE. #4 A AC
NEW BERN 28560 919 633-2712

UNDESSER, KARL PETER 032
1808 STREBOR ST. A R
DURHAM 27705 919 684-8111

UNGER, HENRY ALAN U 092
101 S. W. CARY PARKWAY A P * AC
CARY 27511 919 467-3203
FAX 919 460-8915

UNGERLEIDER, ROSS MICHAEL CDS /PDS 032
BOX 3178, DUMC A C
DURHAM 27710 919 681-2343

UPCHURCH, GILBERT R., JR. 032
103 GOLDSTON DR. A S
CARRBORO 27510 919 942-8105

UPPIN, A. S. GS 029
400 E. CENTER STREET AC
LEXINGTON 27292 704 249-2991

URBANIAK, JAMES RANDOLPH ORS /HS 032
BOX 2912, DUKE HOSPITAL A AC
DURHAM 27710 919 684-2476

USALA, STEPHEN JON IM /END 074
104 KENILWORTH RD. AC
GREENVILLE 27858 919 551-2571

UTESCH, GREGORY RONALD 032
339 BROOKBERRY CIR. R
CHAPEL HILL 27514 919 966-5136

VADNAIS, PAUL ALFRED AN 060
PO BOX 33549 A P AC
CHARLOTTE 28233 704 371-4049

VAINRIGHT, JULIAN R., JR. R /NUR 074
#9 DOCTOR'S PARK AC
GREENVILLE 27834 919 752-5000

VALEA, FIDEL A. GYN /GO 032
104 COLCHESTER CT. R
CHAPEL HILL 27514 919 966-1195

VALERI, FRANK SCOTT CD /IM 060
2330 RANDOLPH RD. A AC
CHARLOTTE 28207 704 377-0575

VALK, HENRY LEWIS IM 034
2828 CLUB PARK RD. L/RT
WINSTON-SALEM 27104

VALLABH, VINOD CHITA IM /GE 077
PO BOX 1537 A AC
ROCKINGHAM 28379 919 443-7678

VALONE, JAMES AUSTIN PS /GS 092
2800 BLUE RIDGE BLVD.,#304 A L
RALEIGH 27607 919 781-7430

VAN CLEEFF, MARTIN 034
11 CREEKVIEW LANE A S
DURHAM 27705 919 723-5437

VAN DER HORST, CHARLES M. ID /IM 032
113 BIRCHCREST PL. AC
CHAPEL HILL 27516 919 966-2536

VAN DOREN, ELIZABETH H. PH 001
209 N. GRAHAM-HOPEDALE RD. A AC
BURLINGTON 27217 919 227-0101

VAN DYKE, ALLEN H., JR. OBG /GYN 032
2609 N. DUKE ST., STE. 204 AC
DURHAM 27704 919 471-8402

VAN FLEET, WILLIAM VERNON P /CHP 023
416 N. LAFAYETTE ST. AC
SHELBY 28150 704 482-7395

VAN HOUTEN, PETER A. OPH 074
301 BOWMAN GRAY DR. A P AC
GREENVILLE 27834 919 758-5800
FAX 919 758-0081

VAN KIRK, MARION P. OPH 045
1701 OLD VILLAGE RD. A AC
HENDERSONVILLE 28739 704 693-1773

VAN SAVAGE, JOHN G. V. 032
127-A ASHLEY FOREST DR. R
CHAPEL HILL 27514 919 966-4131

VAN STAVEREN, GIJSBERTUS F. AN 001
3315 CARRIAGE PL. AC
BURLINGTON 27215 919 584-8150

VAN TASSEL, ERIC D. CD /IM 011
PO BOX 7239 A P AC
ASHEVILLE 28802 704 254-8054

VAN TRIGT, PETER GS /TS 032
BOX 3235, DUMC AC
DURHAM 27710 919 684-3683

VAN ZANDT, KEITH BERGEN FP 034
2805 LYNDHURST AVE. AC
WINSTON-SALEM 27103 919 768-8890

VAN-BLARICOM, LAWRENCE S. NS 011
445 BILTMORE AVE. A AC
ASHEVILLE 28801 704 255-8096

VAN-HOY, JOE MILTON GS 060
3735 ABINGDON ROAD A L/RT
CHARLOTTE 28211 704 364-5069

VAN-VELSOR, HARRY D 065
1924 S. SIXTEENTH STREET A P AC
WILMINGTON 28401 919 762-5207

VANCE, RICHARD PHIL PTH 034
300 S. HAWTHORNE RD. A C
WINSTON-SALEM 27103 919 748-3970

VANCE, THOMAS DOYLE DR 095
904 STATE FARM ROAD A P AC
PO BOX 1097
BOONE 28607 704 264-6984

VANDEMARK, ROBERT M. DR /EM 032
BOX 3808, DUMC A * AC
DEPT. OF RADIOLOGY
DURHAM 27710 919 681-2711

VANDER VEER, CRAIG ANDREW NS 060
1010 EDGEHILL A P AC
CHARLOTTE 28207 704 376-1605
FAX 704 335-8448

VANDERBEEK, RANDALL B. U 011
100 VICTORIA RD. A AC
ASHEVILLE 28801 704 254-8883

VANDERBERRY, ROBERT C., JR. PD /ALD 092
4700 SIX FORKS RD. STE. 220 * AC
RALEIGH 27609 919 881-0585

VANDERSEA, HAROLD MARK ORS 025
800 HOSPITAL DRIVE A AC
NEW BERN 28560 919 638-8113

VANDERSTEENHOVEN, ANN MARIE PTH 032
4412 SUNNY COURT R
DURHAM 27705 919 684-3300

VANDERSTEENHOVEN, JACOB JAN 032
4412 SUNNY COURT R
DURHAM 27705 919 684-3300

VANDIVER, THOMAS JACKSON OBG 060
150 PROVIDENCE ROAD A AC
CHARLOTTE 28207 704 377-0461

VANDIVIERE, H. MAC PUD /PD 032
U. OF KENTUCKY, PED. MN 102 AC
LEXINGTON, KY 40536 606 233-5857

VANZANT, GREG ALAN AN 097
44 HOLLY TREE DR. A AC
WILKESBORO 28697 919 651-8372

VARGAS, CARLOS ABRAHAM DR 036
P. O. BOX 1495 A AC
GASTONIA 28052 704 864-4378

VARGO, JILL SCOTT RHU 011
445 BILTMORE AVE., STE. 306 AC
ASHEVILLE 28801 704 258-9533

VARIA, INDIRA MAHESH P 032
BOX 3889, DUMC AC
DURHAM 27710 919 929-6726

VARIA, MAHESH AMRATLAL TR 032
RADIATION ONCOLOGY-UNC A AC
CB #7512
CHAPEL HILL 27599 919 966-7700
FAX 919 966-7681

VARMA, SHALENDRA KUMAR IM /CD 064
PO BOX 8708 C
ROCKY MOUNT 27804 919 937-7055

VARNELL, ROBERT MARTIN R 034
3155 MAPLEWOOD AVE. A C
WINSTON-SALEM 27103 919 765-2702

VARNER, D. WAYNE PTH 065
346 HONEYCUTT DR. AC
WILMINGTON 28403 919 395-8177

VARNEY, DAVID ALLEN U /GS 096
2400 WAYNE MEMORIAL DR. A AC
GOLDSBORO 27530 919 778-6549

VARTANIAN, VARTAN AN 032
23 CLOVER PL. A RT
DURHAM 27705 919 684-6841

VASEY, CHARLES GIBBS CD 011
PO BOX 7239 AC
ASHEVILLE 28802 704 254-8054

VATZ, BENJAMIN IM 041
1904 N. CHURCH STREET L/RT
GREENSBORO 27405 919 274-3241

VAUGHAN, DANIEL PATRICK IM /ADL 032
UNC STUDENT HEALTH SERVICE AC
CAMPUS BOX 7470
CHAPEL HILL 27599 919 966-2281

VAUGHAN, EDWIN WARNER IM /RIP 041
2632 WALKER AVENUE A L/RT
GREENSBORO 27403 919 299-7909

VAUGHAN, ROBERT WILLIAM AN 032
101 BARNHILL PLACE A AC
CHAPEL HILL 27514 919 966-5136
FAX 919 966-6923

VAUGHAN, ROSS LEROY, JR. NPM /PD 092
WAKE MEDICAL CENTER AC
3000 NEW BERN AVENUE
RALEIGH 27610 919 250-8545

VAUGHN, DONALD EUGENE EM /FP 092
120 WIND CHIME COURT A * AC
RALEIGH 27615 919 847-8821

VAUGHN, ROBERT DEE, JR. GS /VS 060
518 EAST BLVD. AC
CHARLOTTE 28203 704 333-0741

VAUGHN, TOM JIMISON, JR. OBG 086
PO BOX 1408 AC
MOUNT AIRY 27030 919 786-4522

VAUGHT, WILLIAM WAYNE, JR OTO /HNS 001
1206 VAUGHN ROAD A P AC
BURLINGTON 27215 919 226-0660

VEAZEY, ALEX H., JR. FP 045
1228 CHANTELOUP DR. A RT
HENDERSONVILLE 28739 704 693-6124

VELAT, CLARENCE ANTHONY PTH /CLP 040
3301 TAOS CT. A L/RT
DEMING, NM 88031

VENTERS, GEORGE COLE ORS 092
3410 EXECUTIVE DRIVE A AC
RALEIGH 27609 919 872-5296

VENTERS, WAYNE BURNETTE ORS 067
200 DOCTOR'S DRIVE, SUITE J A P * AC
JACKSONVILLE 28540 919 353-1412

VERDONE, GEORGE F. IM /GER 060
3800 WENDWOOD LANE L
CHARLOTTE 28211 704 338-6300

VERELL, KAREN LEA PD /ADL 067
12 OFFICE PARK DR.
JACKSONVILLE 28540 919 352-6262

VERHOEFF, DIRK PUD 060
SEASIDE SPARROW 12 A L/RT
HILTON HEAD ISLAND, SC 29928 803 671-2665

VERMA, KRISHNA MURARI P 098
1072 WATERFORD DR. A P AC
WILSON 27893 919 243-7156

VERMEULEN, FRED D. CRS /GS 060
2015 RANDOLPH RD. #201 A P AC
CHARLOTTE 28207 704 333-1259

VERMUND, HALVOR R 074
DEPT. OF RADIATION ONCOLOGY AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2900

VERNER, HUGH DAVID IM 060
PO BOX 549 L/RT
MONTREAT 28757 704 333-6544

VERNICK, SANFORD HERBERT PM 074
REGIONAL REHAB. CENTER A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4440

VERNON, CHARLES ROBERTSON P 065
7230 WRIGHTSVILLE AVENUE A P * AC
WILMINGTON 28403 919 256-4106

VERNON, JAMES TAYLOR P 012
P. O. BOX 1139 A L/RT
MORGANTON 28655 704 437-5839

VERNON, MICHAEL STEPHEN FP /GER 074
DEPT. OF FAMILY MEDICINE A AC
ECU SCH. OF MED. BRODY 4N-80
GREENVILLE 27858 919 551-2597

VERNON, WALTER BENSON GS 032
BOX 31097, DUMC A AC
DURHAM 27710 919 681-5185

VERROSS, WILLIAM EDWARD OBG 060
449 N. WENDOVER RD. AC
CHARLOTTE 28211 704 364-3760

VESANO, JACK LEE ORS 060
1718 E. 4TH ST., STE. 701 A AC
CHARLOTTE 28204 704 334-0809

VEST, HOWARD RYLAND, JR. AN 092
1204 MELTON COURT A AC
BLUE RIDGE ANESTHESIA
RALEIGH 27615 919 781-4311

VETTER, JOHN STANLEY FP 077
DRAWER 308 AC
ROCKINGHAM 28379 919 895-9075

VICK, HENRY VERNELL FP 033
101 CLINIC DRIVE AC
TARBORO 27886 919 823-2105

VICK, JOHN BERNARD TS /GS 074
905 JOHNS HOPKINS DR. AC
GREENVILLE 27834 919 758-1747

VICK, WILLIAM WOODROW PTH 032
1212 TALLYHO TRAIL A R
CHAPEL HILL 27516 919 684-3300

VIETA, PAUL ANTHONY OBG 026
911 HAY ST. A AC
PO BOX 53514
FAYETTEVILLE 28305 919 485-1191

VIGLIONE, CHERYL ANNE DR 041
119 STAUNTON DR. A AC
GREENSBORO 27410 919 274-3241

VIJAYA, LINGA U 091
1801 RUIN CREEK RD., STE. 121 AC
HENDERSON 27536 919 492-8711

VILLANI, PETER LOUIS GS /VS 078
295 W. 27TH ST. AC
LUMBERTON 28358 919 738-8556

VILLEPONTEAUX, REGINALD IM /PUD 034
1728 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 765-7517

VISCARDI, JEFFREY J. OPH 074
301 BOWMAN GRAY DR. A AC
GREENVILLE 27834 919 758-5800

VISER, PAUL EDWARD IM 082
603 BEAMAN ST. AC
WOODSIDE PROF. BLDG.
CLINTON 28328 919 765-4131

VISSER, PHILIP ALBERT GS /CRS 060
1925 PARK DRIVE A P AC
CHARLOTTE 28204 704 333-1574

VISSER, SCOTT WILLIAM FP 065
5303-E WRIGHTSVILLE AVE. AC
WILMINGTON 28403 919 748-4479

VISSER, VALYA ELIZABETH NPM /PD 060
CAROLINAS MEDICAL CENTER A AC
DEPT. OF PEDIATRICS,BOX 32861
CHARLOTTE 28232 704 355-3156

VITULLO, RAYMOND N. CD 032
5500-65A FORTUNES RIDGE DR. R
DURHAM 27713 919 681-4224

VIVEK, SANDEEP PATHE 034
4608 HIDDENBROOK DR. S
RALEIGH 27609 919 876-8566

VOCI, VINCENT EUGENE PS /HS 036
902 COX RD., STE. B A AC
GASTONIA 28054 704 867-5852

VOGEL, JOSEPH VINCENT PTH 018
ROUTE #2, BOX 197 A AC
CONOVER 28613 704 322-3821

VOGLER, ROBERT C. 032
119-C STINSON ST. A S
CHAPEL HILL 27516 919 933-7867

VOGT, JOEL ALAN P 041
522 N. ELAM AVE., STE. 203 AC
GREENSBORO 27403 919 854-2391

VOIGT, WARD LANDIS GS 021
CHOWAN MEDICAL CENTER AC
EDENTON 27932 919 482-2116

VOLK, JAMES VICTOR PD 045
FLETCHER MEDICAL CENTER AC
FLETCHER 28732 704 693-3296

VOLKMAN, ALVIN PTH 074
DEPT. OF PATHOLOGY A AC
ECU SCH. OF MED BRODY 7E-124
GREENVILLE 27858 919 551-2071
FAX 919 551-3260

VOLKMER, DONALD DURHAM IM 029
OLD 29-70 SOUTH AC
P. O. BOX 579
LEXINGTON 27292 704 249-7785

VON BIBERSTEIN, SARAH E. 074
326 LINDSAY DR., APT. 9 A S
GREENVILLE 27834 919 756-2286

VOORHEES, DIANA R. R 032
2609 N. DUKE ST., STE. 303 * AC
DURHAM 27704 919 471-8411

VOYTEK, ANNA ORS 041
1910 N. CHURCH ST. A AC
GREENSBORO 27405 919 274-7273

VREELAND, WALLING D., JR. GP 034
3910 COUNTRY CLUB ROAD AC
WINSTON-SALEM 27104 919 765-0170

VUKOSON, MATTHEW BRUCE FP 032
UNC, STUDENT HEALTH SERVICE AC
CHAPEL HILL 27599 919 966-2281

VYAS, PANKAJ K. IM 043
109 S. RAILROAD ST. A AC
PO BOX 667
BENSON 27504 919 894-5787

WACHTER, FRANCIS WILFRED PTH 060
PO BOX 33549 A * AC
CHARLOTTE 28233 704 384-4814

WADE, EUGENE HENRY PETER FP 001
723 EDITH STREET AC
BURLINGTON 27215 919 229-4791

WADE, PATRICIA ANN IM 074
PITT MEMORIAL HOSPITAL,
ROOM 389TA AC
GREENVILLE 27858 919 551-4633

WADE, RONALD VAUGHN OBG 060
PO BOX 32861 A * AC
CHARLOTTE 28232 704 338-3153
FAX 704 355-3116

WADON, CAROL M. NS 026
3314 MELROSE RD. C
FAYETTEVILLE 28307 919 484-0693

WADSWORTH, GEORGE HENRY GS 008
P. O. BOX 27 A L/RT
AHOSKIE 27910 919 332-2215

WADSWORTH, JOSEPH A.C. OPH 032
112 MONTROSE RD. A L/RT
DURHAM 27707

WAGGONER, DAVID CARROLL P 000
PO BOX 3229 A AC
VALDOSTA, GA 31604 912 244-3002

WAGGONER, LONNIE AUSTINE, JR. IM 036
2522 SHEFFIELD DR. A L/RT
GASTONIA 28054 704 865-5486

WAGONER, DAVID KIRK PD 060
332 LILLINGTON AVENUE AC
CHARLOTTE 28204 704 376-4493

WAGONER, LYNNE E. IM /CD 074
1527-E 900 SOUTH R
SALT LAKE CITY, UT 84105 801 583-2625

WAHBEH, CAMILLE JAMIL OBG 026
3621 CAPE CENTER DR. AC
FAYETTEVILLE 28304 919 323-4155

WAINER, HOWARD SCHEYER IM /GE 041
301 E. WENDOVER AVE. A AC
GREENSBORO 27401 919 274-3241

WAINER, ROBERT ALAN ORS 041
809 GREEN VALLEY RD. A AC
GREENSBORO 27408 919 275-3325

WAIVERS, LEO EDWARD IM 074
133 ANTLER RD. AC
GREENVILLE 27834 919 551-4633

WALDENBERG, LEOPOLD MARK GS 092
3400 EXECUTIVE DR. STE. 104 A AC
P. O. BOX 17200
RALEIGH 27619 919 876-2732

WALDMAN, GARY DAVID D 090
1307 E. FRANKLIN ST. A AC
MONROE 28110 704 289-9448

WALHA, GURMUKH SINGH ORS /HS 076
542 WHITE OAK STREET AC
ASHEBORO 27203 919 629-4171

WALKER, ANDREW WILLIAM PS /HS 060
2215 RANDOLPH ROAD A * AC
CHARLOTTE 28207 704 372-6846
FAX 704 342-0752

WALKER, ANNE ENGLISH PD 060
427 N. WENDOVER RD. AC
CHARLOTTE 28211 704 332-8139

WALKER, DAVID ANTHONY OPH 063
1902-J N. SANDHILLS BLVD. A AC
ABERDEEN 28315 919 695-0330

WALKER, EDWIN OWSLEY CHP 011
PO BOX 5534 A AC
ASHEVILLE 28813 704 253-3681

WALKER, ELMER PIXLEY GYN 065
20 FOREST HILLS DR. A L/RT
WILMINGTON 28403 919 763-8307

WALKER, GEORGE KIRK PD 034
3318 HEALY DR. AC
WINSTON-SALEM 27103 919 765-8490

WALKER, HARRY GORDON FP 049
310 DAVIE AVENUE A AC
STATESVILLE 28677 704 873-3269

WALKER, JOHN BARRETT,III IM 001
316 N. GRAHAM-HOPEDALE RD. A P AC
BURLINGTON 27217 919 227-3621

WALKER, JOSEPH EDWARDS FP /AI 023
EDWARDS CLINIC A P AC
6433 FALLSTON ROAD
LAWNDALE 28090 704 538-8616

WALKER, LAWRENCE CRUMPLER, JR. OBG 034
2927 LYNDHURST AVE. AC
WINSTON-SALEM 27103 919 765-9350

WALKER, PHILLIP JACKSON NEP /IM 060
928 BAXTER ST. A AC
CHARLOTTE 28204 704 374-1321
FAX 704 334-3061

WALKER, PRESTON ALMAND CHP /P 092
5207 HAWKESBURY AC
RALEIGH 27606

WALKER, RICHARD ISLEY IM /HEM 032
N. C. MEMORIAL HOSPITAL AC
CHAPEL HILL 27599 919 966-4546

WALKER, THOMAS ENGLISH PD 060
610 CONCORD RD. L/RT
DAVIDSON 28036 704 892-4044

WALKER, WILLIAM ALFRED CRS /GS 060
2015 RANDOLPH RD., STE. 201 A P * AC
CHARLOTTE 28207 704 333-1259

WALKER, WILLIAM RAY P 074
DEPT. OF PSYCHIATRY A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2661

WALKER, WILLIAM THOMAS FP 034
202 S. CHERRY ST. A L/RT
KERNERSVILLE 27284 919 993-2011

WALKER, WILLIAM THOMAS, JR. IM 016
#9 MEDICAL PARK A AC
MOREHEAD CITY 28557 919 726-9091

WALKER, WM. P., III 074
3000 GOLDEN RD. #18 A S
GREENVILLE 27858 919 830-9490

WALL, ANTOINETTE WILKES EM 045
PO BOX 1004 AC
SKYLAND 28776

WALL, JACK GARDNER DR 001
686 STILL RUN LN. AC
GRAHAM 27253 919 226-0198

WALL, ROSCOE LEGRAND, JR. GYN /END 034
440 SHERWOOD FOREST ROAD A L/RT
WINSTON-SALEM 27104 919 765-3383

WALL, STEPHEN JAY PD 044
102 HOSPITAL DR. AC
CLYDE 28721 704 452-2211

WALL, WILLIAM STANLEY GP 064
330 S. W. MAIN STREET A L
ROCKY MOUNT 27801 919 446-4952

WALLACE, DONALD KAI IM /GE 063
205 PAGE ROAD AC
PINEHURST 28374 919 295-5511
FAX 919 295-5465

WALLACE, J. W. SCOTT P 060
2040 RANDOLPH RD. A AC
CHARLOTTE 28207 704 334-0875

WALLACE, JOHN MORRIS PTH 084
P. O. BOX 1489 AC
ALBEMARLE 28001 704 982-0148

WALLACE, KELLEY, JR. PS /GS 007
330 N. MARKET ST. A AC
WASHINGTON 27889 919 946-2223

WALLACE, RAYMOND D., JR. OM 014
PO BOX 609 AC
109 FAIRWAY AVE.
HUDSON 28638 704 728-8261

WALLACE, ROBERT BRUCE FP /EM 036
25 E. WOODROW AVE. A AC
BELMONT 28012 704 825-5376

WALLACE, TERRY W. DR 060
CHARLOTTE RADIOLOGY AC
PO BOX 36937
CHARLOTTE 28236 704 333-0224
FAX 704 333-1280

WALLACH, ANDREW B. 032
101-A MISTYWOODS CIR. A S
CHAPEL HILL 27514 919 968-9401

WALLENBORN, PETER AMBROSE,III OTO 011
28 GRIFFING BLVD. AC
ASHEVILLE 28804 704 252-1853

WALLENHAUPT, STEPHEN L. CDS /TS 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-2281

WALLER, LOUIS CLINTON FP 011
7 SHADY LANE L/RT
CANDLER 28715 704 667-1412

WALLER, ROBERT JOSEPH TR 011
200 DOCTOR'S BUILDING A AC
ASHEVILLE 28801 704 255-4100

WALLER, TED JAMES ORS 095
30 DOCTOR'S PARK A P AC
BOONE 28607 704 264-1100

WALLEY, BRUCE DOUGLAS CD /CDS 034
2827 LYNDHURST AVE. STE. 205 A AC
WINSTON-SALEM 27103 919 768-9535

WALLIN, GENE AMBROSE FP 010
1004 N. HOWE ST. A AC
SOUTHPORT 28465 919 457-6214

WALLIN, ROLF BOLIN AN 026
2604 FASHION LANE AC
FAYETTEVILLE 28304 919 323-6061
FAX 919 323-8795

WALLS, BERTRAM EMMANUEL OBG 026
3621 CAPE CENTER DR. A AC
FAYETTEVILLE 28304 919 323-4155

WALSH, CARLE DOUGLAS D 080
400 AVINGER LN., STE. 330 A L/RT
DAVIDSON 28036 704 636-2466

WALSH, EMMETT JAMES, JR. U 074
2 DOCTOR'S PARK A AC
GREENVILLE 27834 919 752-5077

WALSH, ZANE THOMAS, JR. PM 026
2810 HUNTINGTON RD. A AC
FAYETTEVILLE 28303 919 484-3436

WALSTON, ABE, II CD /IM 032
PO BOX 16999 A AC
4205 BEN FRANKLIN BLVD.
DURHAM 27704 919 682-5561

WALTERS-SCHERRER, BARBARA A. P /GP 032
100 FOREST RIDGE C
CHAPEL HILL 27514 919 968-4652

WALTERS, BRADFORD BLAIR NS 032
UNC-NEUROSURGERY A * AC
BURNETT-WOMACK BLDG 229H
CHAPEL HILL 27599 919 966-1374
FAX 919 966-6627

WALTERS, HENRY CEPHAS, JR. IM 049
509 BROOKDALE DR. * AC
STATESVILLE 28677 704 872-6343

WALTERS, HEZEKIAH GROVER, JR. GS 024
220 JEFFERSON ST. S/RT
WHITEVILLE 28472 919 642-3214

WALTERS, PAUL ANDREW AN 034
2832 FAIRMONT ROAD AC
WINSTON-SALEM 27106 919 768-7680

WALTERS, RONALD MARTIN GS /VS 024
220 JEFFERSON ST. AC
WHITEVILLE 28472 919 642-3214

WALTHER, PHILIP JOHN U 032
BOX 3314, DUMC A AC
DURHAM 27710 919 684-5235

WALTON, CAREY JAMES, JR. IM /GE 014
P. O. BOX 1020 L/RT
322 MULBERRY ST., SW
LENOIR 28645 704 758-5544

WALTON, GEORGE BRITAIN, JR. R /NM 024
P. O. BOX 345 A AC
CHADBOURN 28431 919 642-8011

WALTON, RICHARD FRANK FP 011
491 BILTMORE AVE. AC
ASHEVILLE 28801 704 258-0635

WANDER, JOHN C. FP 011
PO BOX 610 AC
FAIRVIEW 28730 704 628-2225

WANEK, ELIZABETH ANN GS /PDS 041
1018 PROFESSIONAL VILL. A AC
GREENSBORO 27401 919 272-6161

WANG, LISA L. 032
20F UNIVERSITY LAKE APTS. A S
CARRBORO 27510 919 933-6341

WANGELIN, ROBERT LESTER P 041
606 WALTER REED DR. A AC
GREENSBORO 27403 919 299-5400

WARBURTON, KEELING ALFRED OBG 040
P. O. BOX 5128 AC
HIGH POINT 27262 919 887-3011

WARBURTON, MARK JOSEPH ORS 040
624 QUAKER LANE, SUITE D-200 P AC
HIGH POINT 27262 919 841-6262

WARBURTON, SAMUEL WOODWARD,JR. FP 032
2220 W. MAIN ST. A C
DURHAM 27705 919 286-3885

WARD, D. E., JR. GS 078
2604 N. ELM STREET A P * L
LUMBERTON 28358 919 738-4276

WARD, DEMMING MORTON IM 080
319 MOCKSVILLE AVENUE * AC
SALISBURY 28144 704 637-3538

WARD, JOHN CHARLES OM 054
410 LAKE PINES DRIVE A L/RT
LAGRANGE 28551 919 566-3119

WARD, JOHN THOMAS OPH 092
3100 BLUE RIDGE RD., STE. 200 AC
RALEIGH 27612 919 787-2211

WARD, MICHAEL MUNDY EM 065
2612 SHANDY LANE AC
WILMINGTON 28409 919 350-0347

WARD, RICHARD M. PTH 025
3 BATTS HILL RD. AC
NEW BERN 28562 919 633-8682

WARD, SIMON V., III OBG 060
2711 RANDOLPH RD. STE. 305 A AC
CHARLOTTE 28207 704 372-8020

WARD, WALTER AVEREL, JR. OTO /A 034
1411-B PLAZA WEST RD. AC
WINSTON-SALEM 27103 919 760-0240

WARD, WILLIAM ALAN ORS 060
1001 BLYTHE BLVD., #200 A AC
CHARLOTTE 28203 704 373-0544

WARD, WILLIAM GOODE ORS 034
3378 SALLY KIRK RD. A R
WINSTON-SALEM 27106 919 659-2661
FAX 919 748-6286

WARE, JULIE LYNNE PD 092
3100 DURALEIGH RD. AC
RALEIGH 27612 919 881-5300

WARLICK, JOHN THOMAS, III U 036
631 COX D
GASTONIA 28054
WARNER, CHARLES ERNEST PD 060
1700 ABBEY PLACE A AC
CHARLOTTE 28209 704 523-7232
FAX 704 521-9762
WARREN, CALVIN GLENN, JR. PD 025
707 PROFESSIONAL DR. AC
NEW BERN 28560 919 633-2900
WARREN, CAMILLE MARIE IM /OM 032
IBM MEDICAL DEPT.523/BLDG 205 A AC
PO BOX 12195
RESEARCH TRIANGLE PK 27709 919 543-3120
WARREN, CASPER CARL, JR. AN 060
8349 BAR HARBOR LANE A AC
CHARLOTTE 28210 704 554-8553
WARREN, JOSEPH BENJAMIN GP 025
203 PINE ROAD * AC
NEW BERN 28560 919 637-5888
WARREN, JULIAN MARION FP 064
P. O. BOX 1120 P * AC
SPRING HOPE 27882 919 478-4600
WARREN, LARRY E. IM 092
503 SUNNYBROOK ROAD AC
RALEIGH 27610 919 231-2162
WARREN, MARK LOWE IM /END 074
1705 W. 6TH ST., BLDG. E AC
GREENVILLE 27834 919 752-6101
FAX 919 752-7781
WARREN, RUFUS H. FP 067
RT. #1, BOX 257 A AC
SNEADS FERRY 28460 919 327-2015
WARREN, THOMAS LARRY OBG 018
RT. #2, BOX 195 AC
CONOVER 28613 704 322-4920
WARREN, THOMAS LINSON AN 060
314 CARLETON CIRCLE AC
SPARTANBURG, SC 29301 704 379-5943
WARRINGTON, LEWIS E. 074
106 SCALES PL., APT. A7 A S
GREENVILLE 27834 919 757-1911
WARSHAUER, ALBERT DAVID AN 074
1608 E. FIFTH STREET A L/RT
GREENVILLE 27858 919 752-5296
WARSHAUER, SAMUEL EDWARD IM /CD 065
2917 HYDRANGEA PL. A L
WILMINGTON 28403 919 762-8388
WARWICK, HIGHT CLAUDIUS AN 041
7 SOMMERTON COURT A L/RT
GREENSBORO 27408 919 545-1966
WASHBURN, HARRILL GENE FP 023
P. O. BOX 815 AC
BOILING SPRINGS 28017 704 434-2281
WASHBURN, SCOTT ALAN OBG 034
300 S. HAWTHORNE RD. C
WINSTON-SALEM 27103 919 748-4595
WASHBURN, WILLARD WYAN GP /FP 023
P. O. BOX 795 A L/RT
BOILING SPRINGS 28017 704 434-7910
WASHINGTON, EDWARD M. AN /AN 060
19633 STOUGH FARMS RD. AC
HUNTERSVILLE 28078 704 663-1113
WASHINGTON, JOHN LANGTRY OBG 001
316 GRAHAM-HOPEDALE RD. A AC
BURLINGTON 27217 704 739-7445
WASHINGTON, MARY KAY PTH 032
503 E. TRINITY AVE. R
DURHAM 27701 919 684-3300
WASSEL, JOHN JOSEPH ORS 013
PO BOX 1606 A P AC
CONCORD 28026 704 788-3155
FAX 704 788-3487
WATANABE, TSUNEO KENT OTO /PSF 092
101 S. W. CARY PARKWAY A AC
CARY 27511 919 467-7380
WATERMAN, DIEDRICH COLLINS IM /GE 092
3100 BLUE RIDGE RD. P AC
RALEIGH 27612 919 781-7500
WATERS, GREGORY STIEGLER 074
1802 WOODHILL TRAIL S
AUGUSTA, GA 30909
WATERS, ZACK JAMES, JR. GS 007
604 E. 12TH STREET AC
WASHINGTON 27889 919 946-9004

WATKINS, CARLTON GUNTER PD 060
8713 GAINSFORD CT. L/RT
CHARLOTTE 28210 704 372-7790
WATKINS, GLEN LEE OTO /HNS
14206 MANIFEST WAY A R
GAITHERSBURG, MD 20878
WATKINS, JAMES ALLISON GS 060
518 EAST BLVD. AC
CHARLOTTE 28203 704 333-0741
WATKINS, ROY WAYNE FP 060
7810 PROVIDENCE RD. AC
ARBORETUM URGENT CARE
CHARLOTTE 28226 704 543-6636
WATKINS, WALTER DAVID AN /PA 032
BOX 3094, DUMC A AC
DURHAM 27710 919 681-2498
FAX 919 681-2923
WATSON, JAMES MORRIS ORS 070
1134 N. ROAD STREET A AC
ELIZABETH CITY 27909 919 338-3993
WATSON, JERRY FRANKLIN GS 097
EIGHTH ST. AC
PO BOX 789
N. WILKESBORO 28659 919 667-1183
WATSON, JOHN WILLIAM FP 039
104 NEW COLLEGE STREET A AC
OXFORD 27565 919 693-8126
WATSON, MELVIN E. PD 065
5305-N WRIGHTSVILLE AVE. A AC
WILMINGTON 28403 919 392-5634
WATSON, NAT ERSKINE, JR. NM /IM 034
766 OAKLAWN AVENUE AC
WINSTON-SALEM 27104 919 748-3520
WATSON, PETER ROBINS HEM /ON 054
313 AIRPORT ROAD AC
KINSTON 28501 919 522-3072
FAX 919 522-2969
WATSON, ROBERT ANDREW FP /GER 001
311 TRUITT DR. AC
ELON COLLEGE 27244 919 227-3643
WATSON, STANLEY R. 032
RT. #6, BOX 519-A R
CHAPEL HILL 27514 919 966-2491
WATSON, SUSAN A. OPH 064
WATSON EYE, PA A P AC
108 NASH MEDICAL ARTS MALL
ROCKY MOUNT 27804 919 536-3130
WATSON, WILLIAM JAMES 032
CB 7570 MACNIDER R
UNC SCHOOL OF MEDICINE
CHAPEL HILL 27599 919 966-1601
WATTERSON, PAUL ALMA PS 060
2215 RANDOLPH RD. A AC
CHARLOTTE 28207 704 372-6846
WATTS, CHARLES DEWITT GS /ABS 032
510 SIMMONS STREET L
DURHAM 27701 919 688-3391
WATTS, HUGH BOYD ORS 080
130 MOCKSVILLE AVE. A P AC
SALISBURY 28144 704 637-8770
WATTS, JOHN COMER, III PD 036
1839 E. GARRISON BLVD. AC
GASTONIA 28054 704 864-2685
WATTS, LESTER EARL CD /IM 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4581
WATTS, PLATO H., JR. PD /A 001
430 S. SPRING ST. A AC
BURLINGTON 27215 919 584-6476
WAUGH, WILLIAM HOWARD NEP /IM 074
DEPT. OF PHYSIOLOGY A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2773
WAY, BRADY COLE GS 016
3 MEDICAL PARK AC
MOREHEAD CITY 28557 919 726-1136
WAY, JOHN EDWARD GS 016
#3 MEDICAL PARK A L
MOREHEAD CITY 28557 919 726-1136
WAYS, DOUGLAS KIRK END 074
121 N. LONGMEADOW RD. AC
GREENVILLE 27834 919 551-2571
WEADON, PRESTON STENZ NS 045
475 KING WILLIAM ROAD A RT
HENDERSONVILLE 28739 704 697-6857

WEAR, JOHN EDMUND R 080
113 PINE TREE RD. L/RT
SALISBURY 28144 704 633-1022
†**WEARN, FRANKLIN STAFFORD** GS /EM 049
P. O. BOX 1746 A
DECEASED--12-5-90
STATESVILLE 28677 704 872-9494
WEAST, ROBERT RANDOLPH DR 011
STE. 301, 445 BILTMORE CENTER A AC
ASHEVILLE 28801 704 254-2371
FAX 704 252-1846
WEATHERLY, WILLIAM JESSE GS 041
1014 PROFESSIONAL VILLAGE AC
GREENSBORO 27401 919 373-1078
WEATHERS, BAILEY GRAHAM, JR. FP 036
222 S. MAIN STREET AC
STANLEY 28164 704 263-8945
WEAVER, DAVID ELLIS 032
105 MALLARD CT. R
CHAPEL HILL 27514 919 966-5201
WEAVER, EDWARD HARRISON P 034
190 CHARLOIS BLVD. A AC
WINSTON-SALEM 27103 919 768-6930
FAX 919 768-6328
WEAVER, FREDERICK BROWN IM 034
1409 PLAZA DRIVE AC
WINSTON-SALEM 27103 919 765-4301
WEAVER, JAMES PHILLIP CDS 032
PO BOX 15249 A * AC
3901 ROXBORO RD.
DURHAM 27704 919 479-4100
WEAVER, JOSEPH DUDLEY FP 008
111 N. MAPLE STREET L
AHOSKIE 27910 919 332-2196
WEAVER, MICHAEL DAVID DR 074
EASTERN RADIOLOGISTS AC
#9 DOCTORS PARK
GREENVILLE 27834 919 830-5189
FAX 919 752-0166
WEAVER, R. GREY, JR. PD 034
771 REAFORD ROAD AC
WINSTON-SALEM 27104 919 748-4091
WEAVER, ROY ALBERT PTH 026
CAPE FEAR HOSPITAL A P AC
PO BOX 2000
FAYETTEVILLE 28302 919 323-6149
WEAVER, ZEBULON, III ON /HEM 011
80 VICTORIA ROAD AC
ASHEVILLE 28801 704 258-0994
WEBB, BAILEY PD 032
2616 ERWIN RD., APT. D-2 A L/RT
DURHAM 27705 919 382-7458
WEBB, LAWRENCE XAVIER ORS /TRS 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-3606
WEBB, MICHAEL STEPHEN, JR. DR 032
2109 SPRUNT AVE. A R
DURHAM 27705 919 286-5959
WEBB, ROBERT KENT NEP /IM 026
PO BOX 42736 A AC
FAYETTEVILLE 28304 919 484-8114
WEBB, WILLIAM WHITAKER, JR. D 080
PO BOX 2145 A AC
400-C MOCKSVILLE AVE.
SALISBURY 28145 704 636-0971
WEBER, GLENDA H. PTH 034
P. O. BOX 809 A AC
CLEMMONS 27012 919 768-7680
WEBSTER, GEORGE DAVID U 032
DUMC, DIV. OF UROLOGY A AC
DURHAM 27710 919 684-2516
WEBSTER, JOEL STOOPS CD /IM 060
2330 RANDOLPH AT LAUREL A AC
CHARLOTTE 28207 704 377-0575
WEBSTER, JOSEPH BRADLEY 032
225-C JACKSON CIRCLE S
CHAPEL HILL 27514 919 933-6606
WEEKS, DUKE BYRON AN 034
2615 TALLWOOD COURT A AC
WINSTON-SALEM 27106 919 748-4791
WEEKS, FREDERICK M. 032
201 HOWELL RD. #3C S
CHAPEL HILL 27514 919 933-1259
WEEKS, JOHN WESLEY OBG 036
2575 PEMBROKE RD. AC
GASTONIA 28054 704 864-8865

WEEKS, KENNETH DURHAM IM /CD 064
1051 COUNTRY CLUB DR. A L/RT
PO BOX 7828
ROCKY MOUNT 27804 919 937-4084

WEEKS, KENNETH DURHAM, JR. IM /CD 060
1718 E. 4TH ST. #501 AC
CHARLOTTE 28204 704 347-2024
FAX 704 347-2011

WEEKS, LANDON EARL GE /IM 034
2808 MAPLEWOOD AVENUE C
WINSTON-SALEM 27103 919 768-6211
FAX 919 768-6869

WEERAKOON, RANJIT IM /PUD 036
101 CAROLINA COUNTRY PLAZA AC
DALLAS 28034 704 922-3106

WEHBIE, CHARLES SAM IM 092
3900 BROWNING PL. AC
RALEIGH 27609 919 781-3650

WEHBIE, ROBERT SAM 032
1000 SMITH LEVEL RD. APT. C-4 R
CARRBORO 27510 919 966-4113

WEHRY, MARK A. 074
102 SOMERSET DR. S
GREENVILLE 27834 919 752-2434

WEIDAW, HAROLD RICHARD AI /IM 063
165 PAGE RD. A AC
PINEHURST 28374 919 295-6661
FAX 919 295-6524

WEIGEL, MARK TURNER OTO /FPS 060
8736 UNIVERSITY CITY BLVD. A AC
CHARLOTTE 28213 704 547-1609

WEILBAECHER, JAMES EDWARD, JR. ORS 011
129 MCDOWELL STREET AC
ASHEVILLE 28801 704 258-8800

WEIN, ROBERT MICHAEL OBG 041
721 GREEN VALLEY RD., STE. 201 A AC
GREENSBORO 27408 919 378-1110

WEINBERG, RICHARD BARRY GE 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-4612

WEINEL, WILLIAM HARVEY GYN 065
1809 GLEN MEADE ROAD A AC
WILMINGTON 28403 919 763-9833

WEINERTH, JOHN LOUIS U /GS 032
DUKE, DEPT. OF SURGERY A AC
DURHAM 27710 919 684-4157

WEINGARTEN, NORDEN M. ID 060
1928 RANDOLPH RD., STE. 314 A P AC
CHARLOTTE 28207 704 331-9413

WEINRICH, A. ELISE D 032
2609 N. DUKE ST. STE. 505 A AC
DURHAM 27704 919 477-2121

WEINSTEIN, ROBERT HARVEY P 065
2595 S. 17TH ST. A P AC
WILMINGTON 28401 919 799-2283

WEINTRAUB, ILENE D. 032
8 DUNMORE CT. R
DURHAM 27713 919 684-8111

WEINTRAUB, RICHARD ALAN CD /IM 041
520 N. ELAM AVE. A AC
GREENSBORO 27403 919 547-1700

WEIR, SHAWNEE DEE END 092
3120 HIGHWOOD BLVD. C
RALEIGH 27604 919 881-5412

WEIS, WALTER FRANCIS, JR. ORS 065
5305 WRIGHTSVILLE AVE. BLDG. C AC
WILMINGTON 28403 919 799-9417

WEISENAUER, CYNTHIA JO 034
BOX 175, BOWMAN GRAY S
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 724-4638

WEISENBERGER, ANTHONY JOSEPH P 011
APPALACHIAN HALL AC
P. O. BOX 5534
ASHEVILLE 28813 704 253-3681

WEISER, MARK ROBERT FP 029
10 MEDICAL PARK DR. A AC
LEXINGTON 27292 704 249-2791

WEISGERBER, DAVID WM. IM 018
307 10TH AVE. NE A AC
HICKORY 28601 704 327-9898

WEISLER, RICHARD HARRY P 092
3320 EXECUTIVE DR. STE. 216 A AC
RALEIGH 27609 919 782-4672

WEISS, JAMES RICHARD P /PYA 032
111 CLOISTER CT., STE. 112 AC
CHAPEL HILL 27514 919 489-2671

WEISS, JOSEPH WALTON P 041
522 N. ELAM AVENUE, STE. 203 AC
GREENSBORO 27403 919 854-2391

WEISS, RICHARD ELLIOTT NS 011
7 MCDOWELL STREET A AC
ASHEVILLE 28801 704 255-7776

WEISSLER, MARK C. OTO /HNS 032
610 BURNETT-WOMACK BLDG. A AC
UNC CB #7070
CHAPEL HILL 27599 919 966-3341

WEISSMAN, JAMES MICHAEL GE /IM 041
1904 N. CHURCH STREET A AC
GREENSBORO 27405 919 274-3241

WEITZNER, STANLEY WALLACE AN 032
104 HAMPSHIRE PL. AC
CHAPEL HILL 27516 919 684-2425

WELBORN, JAMES TODD FP 029
17 E. SECOND AVENUE S/RT
LEXINGTON 27292 704 246-5625

WELBORN, JULIUS WARREN, JR. IM /OM 041
4803 OAKCLIFFE RD. L/RT
GREENSBORO 27406 919 674-2020

WELCH, CARL LESTER FP 018
221 13TH AVE. PL. NW AC
HICKORY 28601 704 322-5800

WELCH, EARL PARKS, JR. GS /TS 034
2825 LYNDHURST AVE. STE. 105 A AC
WINSTON-SALEM 27103 919 760-3112

WELCH, JACK H. AN 074
1705 W. 6TH ST. A AC
GREENVILLE 27834 919 752-2140

WELLBORN, WILLIAM REVERE, JR. OBG 012
PO BOX 259 L/RT
LAKE LURE 28746 704 625-1924

WELLENDORF, TRACEY GENE 032
404 JONES FERRY RD., APT. E-15 R
CARRBORO 27510 919 932-1268

WELLER, EDWARD BROOKS ORS 040
624-D 200 QUAKER LANE P AC
HIGH POINT 27262 919 841-6262

WELLISH, CARL SHELDON P /LM 031
PO BOX 925 AC
KENANSVILLE 28349 919 296-1758

WELLS, CHARLES LEWIS PTH 026
CAPE FEAR VALLEY MED. CTR. A AC
PO BOX 2000
FAYETTEVILLE 28302 919 323-6149

WELLS, DAVID MORELLE DR 077
PO BOX 99 A AC
ROCKINGHAM 28379 919 997-6311

WELLS, EDWIN JULIUS PS 065
2205 GILLETTE DR. L/RT
WILMINGTON 28403 919 763-7617

WELLS, EUGENE AN 049
327 ST. ANDREWS RD. AC
STATESVILLE 28677 704 873-0281

WELLS, HELEN LEWIS GP 020
PO BOX 593 AC
MURPHY 28906 704 837-4201

WELLS, JAMES SHELTON, JR. P /PYM 032
5024 BOULDER RUN ROAD A AC
HILLSBOROUGH 27278 919 967-6353

WELLS, MARIUS HUGHEY GS 088
NEWLAND MED. BLDG. AC
11 GALLIMORE RD.
BREVARD 28712 704 884-9030

WELLS, RHEUDOLPH JAMES OTO /PS 041
602 PASTEUR DRIVE A AC
GREENSBORO 27403 919 292-5818

WELLS, ROBERT STANLEY IM 011
445 BILTMORE CTR., STE. 407 A P * AC
ASHEVILLE 28801 704 258-0397

WELLS, WARNER LEE GS 032
104 MARKHAM DR. A L/RT
CHAPEL HILL 27514 919 968-0069

WELTON, DAVID GOE D 060
1131 SCOTLAND AVE. A L/RT
CHARLOTTE 28207 704 333-5927

WENZEL, FREDERICK GEORGE GS 044
102 HOSPITAL DR., STE. 12 AC
CLYDE 28721 704 456-8624

WERK, EMILE EUGENE, JR. IM /END 065
2131 S. SEVENTEENTH STREET AC
WILMINGTON 28401 919 343-0161

WERT, MICHAEL B. IM 041
520 N. ELM ST. AC
GREENSBORO 27403 919 547-1700

WERTMAN, DANIEL EDWARD, JR. R 032
DURHAM GEN. HOSP-RAD. AC
DURHAM 27704 919 471-3411

WERTMAN, MARK GRAHAM ORS 025
PO DRAWER 1694 A P AC
TRIANGLE PLAZA
NEW BERN 28560 919 633-4477

WESSON, LYNN ELISE P /U 060
1900 RANDOLPH RD., STE. 900 AC
CHARLOTTE 28207 704 333-7726

WEST, GEORGE HARPER IM /CD 054
109 AIRPORT ROAD A AC
KINSTON 28501 919 522-3661

WEST, ROBERT LEE PTH 074
RT. 8, BOX 769 A P * AC
GREENVILLE 27834 919 551-4496

WEST, THADDEUS C., III 074
1113 TREYBROOKE CIRCLE A S
GREENVILLE 27834 919 830-0316

WESTER, MILLARD WINSTON, JR. FP 091
2111 COLEMAN PL. L/RT
HENDERSON 27536 919 438-7284

WESTER, THADDEUS BRYAN PH /PD 092
1001 BRIGHTHURST DR., APT. 101 A P * AC
RALEIGH 27605 919 733-4984

WESTFALL, LORNA ANN 041
1200 N. ELM ST. R
GREENSBORO 27401 919 379-3900

WESTLAND, MARGARET M. H. GPM 032
GLAXO, INC A AC
FIVE MOORE DR.
RESEARCH TRIANGLE PK 27709 919 990-5057

WESTLY, STEPHEN K. ORS /HS 011
PO BOX 1980 A AC
ASHEVILLE HAND CTR., PA
ASHEVILLE 28802 704 258-0847

WETTER, JAMES MICHAEL FP 026
1601-B OWEN DRIVE A AC
FAYETTEVILLE 28306 919 323-1152

WETTREICH, HERBERT L. OTO 049
648 CARPENTIER ST. A C
MOORESVILLE 28115

WHALEN, ROBERT EMMET CD /IM 032
DUKE UNIV. MED. CTR. A * AC
DURHAM 27710 919 684-6315
FAX 919 684-8666

WHALEY, ROBERT ALLAN DR /N 032
748 SHADYLAWN ROAD AC
CHAPEL HILL 27514 919 966-4397

WHANGER, ALAN DUANE P 032
1712 WOODBURN ROAD AC
DURHAM 27705 919 684-2545

WHATLEY, JOSEPH WILLIAM, JR. PDA /A 032
2919 COLONY ROAD A AC
DURHAM 27705 919 489-9158

WHEATLEY, JAMES WALTER OPH 013
500 LAKE CONCORD RD., NE A AC
CONCORD 28025 704 782-1127

WHEATLEY, SAMUEL NALLY GYN 024
BALDWIN WOODS AC
WHITEVILLE 28472 919 642-3294

WHEELER, CLAYTON EUGENE, JR. D /IM 032
NCMH, DEPT. OF DERMATOLOGY P L
CHAPEL HILL 27599 919 966-4507

WHEELER, MICHAEL STEVENS PTH 081
101 COUNTRY WOODS DR. A AC
RUTHERFORDTON 28139 704 286-5121

WHEELER, WM. STEPHEN CD /IM 074
BURROUGHS-WELLCOME AC
RESEARCH TRIANGLE PK. 27709

WHELAN, JOSEPH G., JR. R 060
2001 VAIL AVE. AC
CHARLOTTE 28207 704 379-5866
FAX 704 379-5484

WHELESS, JAMES E., JR. 000
206 N. 15TH STREET A R
WILMINGTON 28401 919 343-7000

WHELESS, THOMAS O. FP /GER 035
106 JOHN ST. L/RT
LOUISBURG 27549 919 496-3566

WHELISS, JOHN ANGUS OPH 092
2800 BLUE RIDGE BLVD. STE. 407 A AC
RALEIGH 27607 919 781-7402

WHETSELL, DOUGLAS WAYNE IM /PUD 026
1756 METROMEDICAL DR. A AC
FAYETTEVILLE 28304 919 323-1322
FAX 919 323-1510

WHICKER, CHARLES FINCH OBG 097
BRUSHY MOUNTAIN OB-GYN ASSOC. AC
MEDICAL ARTS BLDG.
N. WILKESBORO 28659 919 667-1156

WHICKER, JAMES HUBERT OTO 092
3010 ANDERSON DRIVE AC
P. O. BOX 18946
RALEIGH 27619 919 787-7171
FAX 919 787-6427

WHICKER, WINFRY EVANS FP 080
P. O. BOX 595 A AC
CHINA GROVE 28023 704 857-1108

WHIDDON, SCOTT M. R 014
PO BOX 659 A AC
LENOIR RADIOLOGY ASSOCS., PA
LENOIR 28645 704 754-2283

WHISNANT, JOSEPH DURWOOD, JR. U 064
3136 SUNSET AVE. A AC
ROCKY MOUNT 27801 919 443-3136
FAX 919 443-3847

WHITAKER, CATHY LYNN AN 034
300 S. HAWTHORNE RD. AC
DEPT. OF ANESTHESIA
WINSTON-SALEM 27103 919 748-4498

WHITAKER, DONALD NASH FP 092
2016 CAMERON STREET L/RT
RALEIGH 27605 919 832-0343

WHITAKER, DONALD NASH, JR. CD /IM 013
140 LECLINE DRIVE, NE AC
CONCORD 28025 704 788-3367

WHITAKER, ELIZABETH GRIMES 032
311 S. LASALLE ST. APT. 151 S
DURHAM 27705 919 382-2959

WHITAKER, GARY RANDALL EM 032
2828 CROASDAILE P * AC
DURHAM 27705 919 383-0355
FAX 919 383-3609

WHITAKER, JAMES ALLEN U 064
624 FALLS ROAD A L
ROCKY MOUNT 27804 919 442-3516

WHITAKER, JAMES ALLEN, III CD /IM 098
1700 S. TARBORO ST. A AC
WILSON 27893 919 399-2218

WHITAKER, RICHARD HARPER GP 034
120 N. CHERRY ST. A L/RT
KERNERSVILLE 27284 919 993-4242

WHITAKER, ROBERT N., JR. 034
1939 GASTON ST. R
WINSTON-SALEM 27103 919 748-8416

WHITE, DONALD P., JR. IM /GE 050
RT. #2, BOX 174-J A AS
HIGHLANDS 28741 704 526-4668

WHITE, DOUGLAS RECTOR ON /HEM 034
BOWMAN GRAY, DEPT. OF MED. A AC
WINSTON-SALEM 27103 919 748-4380

WHITE, EMMETT ROYCE TR /R 012
BOX 10 AC
RUTHERFORD COLLEGE 28671 704 879-9541

WHITE, FRANKLIN DELANO FP 019
P. O. BOX 567 AC
SILER CITY 27344 919 663-2761

WHITE, GROVER WATTS U 036
631 COX ROAD AC
GASTONIA 28054 704 864-7764

WHITE, JAMES LEE AN
GEORGETOWN UNIV. HOSPITAL R
DEPT. OF ANESTHESIA
WASHINGTON, DC 20007 202 784-2765

WHITE, KENNETH SAMUEL PS /GS 065
2305 CANTERWOOD DR. A AC
WILMINGTON 28401 919 343-0119

WHITE, MACK WILLIS, III IM 060
7108 PINEVILLE-MATTHEWS RD. AC
CHARLOTTE 28226 704 542-1952

WHITE, PHILIP FLETCHER GP 077
P. O. BOX 1827 A L
ROCKINGHAM 28379 919 895-5253

WHITE, RANDAL EARL RHU 074
407 CEDARHURST RD. A AC
GREENVILLE 27834 919 752-6101

WHITE, RONDA SNOW OBG 040
PO BOX 5128 AC
HIGH POINT 27262

WHITE, SEAN P. 074
ROUTE #8, BOX 330-P A * S
GREENVILLE 27834 919 757-3046

WHITE, STEVEN MERLE OPH 074
301 BOWMAN GRAY DR. A P AC
GREENVILLE 27834 919 758-5800

WHITE, TERRY EDWARD PM 011
PO BOX 15025 A AC
ASHEVILLE 28813 704 274-2400

WHITE, THOMAS HUGH OBG 060
1718 E. FOURTH ST. #307 AC
CHARLOTTE 28204 704 332-8103

WHITE, THOMAS RHYNE FP 023
112 S. OAK ST. AC
CHERRYVILLE 28021 704 435-1100

WHITE, WILLIAM BRADLEY ORS 032
1828 HILLANDLE RD. A * AC
DURHAM 27705 919 286-1249

WHITE, WILLIAM ELLIOTT PD 060
2220 RED FOX TRAIL L/RT
CHARLOTTE 28221 704 366-8697

WHITE, WILLIAM HENRY, JR. OBG 053
1140 CARTHAGE ST. A AC
SANFORD 27330 919 775-2304

WHITEHURST, ARTHUR W. U 032
2609 N. DUKE ST., STE. 102 A AC
DURHAM 27704 919 471-8423

WHITEHURST, LEE ALBERT ORS 092
TRIANGLE SPINE/BACK CARE CTR. A AC
3320 WAKE FOREST RD.STE. 430
RALEIGH 27609 919 876-7676

WHITEHURST, WALTER CLAYTON,JR. DR 067
201 DEBORAH DRIVE A AC
JACKSONVILLE 28540 919 577-2274

WHITENER, BETTY LOU FP 039
P. O. BOX 220 AC
OAK RIDGE, LA 71264 318 647-3720

WHITENER, DONALD LEONARD OBG 034
3265 STAGHORN RD. L/RT
WINSTON-SALEM 27104 919 765-9350

WHITENER, ROBERT WILFONG P 041
1024 PROFESSIONAL VILLAGE AC
GREENSBORO 27401 919 274-1250

WHITESIDE, JOHN HARVEY OBG 060
150 PROVIDENCE ROAD A AC
CHARLOTTE 28207 704 377-0461

WHITESIDES, EDWARD STEELE ORS 036
902 COX ROAD, SUITE D AC
GASTONIA 28054 704 864-6723

WHITESIDES, EDWARD WM. U 032
1108 WILLOW DR. A R
CHAPEL HILL 27514 919 967-7440

WHITESIDES, PAUL C. IM /END 065
1515 DOCTOR'S CIR. AC
WILMINGTON 28401 919 763-1219

WHITFIELD, PETER WHITE ORS 041
201 E. WENDOVER AVE. A AC
GREENSBORO 27401 919 274-1957

WHITLEY, DANIEL, JR. OTO /HNS 096
2707 MEDICAL OFFICE PL. A AC
GOLDSBORO 27534 919 735-9146
FAX 919 735-0582

WHITLEY, JOHN M. 034
2424 APRICOT LANE S
AUGUSTA, GA 30904

WHITLOCK, GARY THOMAS, III EM /ALD 067
104 LESLIE DR. C
HUBERT 28539 919 451-4840

WHITNEY, PAMELA JOYCE N 092
3320 EXECUTIVE DR., STE. 218 A AC
RALEIGH 27609 919 872-0940

WHITNEY, SUSAN J. G. 032
RT. 9, #11, JONES BRANCH S
CHAPEL HILL 27514 919 929-8486

WHITTEN, CHRISTOPHER JOHN AN 065
117 PARMEL BLVD. AC
WRIGHTSVILLE BEACH 28480 919 452-0816

WHITWORTH, CLAUDE PHILLIP IM 081
312 S. RIDGECREST A P * AC
RUTHERFORDTON 28139 704 286-9036
FAX 704 286-1225

WICKER, JOSEPH BEAMAN AN 074
1000 CREEK STONE TRACE AC
LEXINGTON, KY 40517

WIDENER, HERBERT LLOYD RHU /IM 060
1350 S. KINGS DRIVE AC
CHARLOTTE 28207 704 372-8750
FAX 704 332-7020

WIDNER, LARRY ALLEN R 040
1310 KENSINGTON DR. AC
HIGH POINT 27260 919 887-1926

WIEGAND, STEVEN FREDERICK EM /FP 092
10305 WHITESTONE ROAD A AC
RALEIGH 27615 919 848-9471

WIENER, JOHN SAMUEL U 032
2413 DELLWOOD DR. A R
DURHAM 27705 919 684-8111

WIER, FRED EUGENE GS /VS 042
725-D HAMILTON ST. A AC
ROANOKE RAPIDS 27870 919 572-3737

WIESLER, ETHAN RON 034
129 WOODBRIAR RD. S
WINSTON-SALEM 27106 919 760-3630

WIEST, HELEN HYMAN R 011
PO BOX 2959 C
ASHEVILLE 28802 704 254-4617

WIGGINS, THOMAS BARNES DR 034
3155 MAPLEWOOD AVE. A AC
WINSTON-SALEM 27103 919 760-5874

WIGGS, WILLIAM J., JR. OTO 074
RR #8, BOX 223-C S
GREENVILLE 27834 919 830-8832

WIGOD, MARK DAVID 032
4800 UNIVERSITY DR. #17-T S
DURHAM 27707 919 684-1985

WILCOX, BENSON REID CDS /TS 032
UNC, CB 7065 A AC
BURNETT-WOMACK #108
CHAPEL HILL 27599 919 966-3381
FAX 919 966-3475

WILCOX, WILLIAM DAVID OPH 032
116 CRUTCHFIELD ST. A AC
DURHAM 27704 919 477-8050

WILDE, GUSTAV C.
USAF ACADEMY HOSPITAL, SGQ R
USAF ACADEMY, CO 80840

WILDER, RABOTEAU 063
PO BOX 2001 L/RT
SOUTHERN PINES 28387 919 692-0291

WILEY, ALBERT LEE, JR. TR /NM 074
ECU SCHOOL OF MEDICINE A AC
INTERIM DIR., ECU CANCER CTR.
GREENVILLE 27858 919 551-2900
FAX 919 551-2186

WILEY, JERRY WILLIAM PD 092
PO BOX 40395 * AC
RALEIGH 27629 919 733-2833
FAX 919 733-0488

WILFERT, CATHERINE M. MINOCK PD /ID 032
BOX 2951, DUMC AC
DURHAM 27710 919 684-6610
FAX 919 684-5653

WILFONG, ROBERT FARRINGTON NS 025
2713 NEUSE BLVD
NEW BERN 28560

WILHELMSEN, BRUCE ORS 074
604 MEDICAL DRIVE A AC
GREENVILLE 27834 919 758-1777

WILHOIT, RANDALL D., III AN 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-4498

WILKERSON, ANNIE LOUISE OBG /GYN 092
4420 LAKE BOONE TR. STE. 302 A L
PO BOX 98837
RALEIGH 27607 919 832-5529

WILKERSON, JACK WINFIELD FP 074
P. O. BOX 1966 AC
GREENVILLE 27834 919 752-7133

WILKERSON, LOUIS REAMS GYN 092
4420 LAKE BOONE TR., STE. 302 * AC
RALEIGH 27607 919 571-1040

WILKINS, EZRA BROOKS FP 092
3100 BLUE RIDGE RD., STE. 202 AC
RALEIGH 27612 919 782-0146

WILKINS, KENNETH WORTH, JR. IM 025
702 NEWMAN ROAD * AC
MCCARTHY SQUARE
NEW BERN 28560 919 633-5333
FAX 919 633-9443

WILKINS, LUCIEN SANDERS GE 065
1202 MEDICAL CENTER DRIVE AC
WILMINGTON 28401 919 341-3346

WILKINS, ROBERT HENRY NS 032
BOX 3807, DUMC A AC
DURHAM 27710 919 684-2549

WILKINS, STANLEY A., JR. OTO /HNS 092
3100 BLUE RIDGE RD. AC
RALEIGH 27607 919 787-1374

WILKINSON, CHARLES ALBERT GS /TS 065
1501 MEDICAL CENTER DRIVE AC
WILMINGTON 28401 919 763-6289
FAX 919 251-1420

WILKINSON, JAMES SPENCER,SR. D 092
215 BRYAN BLDG. A * L
RALEIGH 27605 919 832-6044

WILKINSON, ROBERT HOLDEN, JR. NM /R 032
BOX 3949, DUMC A AC
DURHAM 27710 919 681-2711

WILL, THOMAS AUGUSTINE GP 036
307 WORTH ST. L/RT
DALLAS 28034 704 922-3106

WILLARD, VIRGIL V., II PS 040
308-B BOULEVARD A P AC
HIGH POINT 27262 919 866-1667

WILLCOCKSON, WILLIAM S. EM 001
503 SHARON RD. A AC
CHAPEL HILL 27514 919 228-1371

WILLETT, EUGENE STANLEY ORS 011
111 VICTORIA AT OAKLAND ROAD A AC
ASHEVILLE 28801 704 252-7331

WILLETT, ROBERT W. IM /N 092
3320 WAKE FOREST RD. AC
RALEIGH 27609 919 782-7500

WILLHIDE, MARGARET JANE PD /A 049
P. O. BOX 1460 AC
STATESVILLE 28677 704 873-0281

WILLI, MARC ANTHONY FP 025
1405 TOSTO CIRCLE A AC
ORIENTAL 28571 919 745-3191

WILLIAMS, BARRY NEIL P 034
3000 BETHESDA PL., STE. 801 A AC
WINSTON-SALEM 27103 919 659-9141

WILLIAMS, CHARLES D. PUD /IM 060
PRESBYTERIAN HOSP. A AC
1600 E. FIFTH ST.
CHARLOTTE 28204 704 384-7575
FAX 704 384-7580

WILLIAMS, CHARLES EMERY OTO /HNS 011
285 MCDOWELL STREET AC
ASHEVILLE 28803 704 252-1853

WILLIAMS, DAVID LEON IM /HEM 063
540 N. W. BROAD STREET A * AC
SOUTHERN PINES 28387 919 692-2061

WILLIAMS, DAVID R. U 045
512 6TH AVE. WEST A AC
HENDERSONVILLE 28739 704 692-6262

WILLIAMS, DAVID ROBERT PD 029
200 ARTHUR DR. AC
THOMASVILLE 27360 919 475-2348

WILLIAMS, ERNEST COUNCIL GS /TS 036
3618 CLUB COLONY DR., W. A L/RT
GASTONIA 28056 704 864-1417

WILLIAMS, JACK DEAN OTO 023
209-B LEE ST. A P AC
PO BOX 1968
SHELBY 28150 704 487-9088

WILLIAMS, JILL ANNETTE 074
2608 MULBERRY LN. A S
ARLINGTON SQUARE APTS.
GREENVILLE 27858 919 355-8825

WILLIAMS, JOHN DUDLEY, JR. GYN 041
1715-A W. MARKET ST. A L
GREENSBORO 27403 919 272-8833

WILLIAMS, JOHN HOWARD IM /EN 092
1121 PARK RIDGE LN., #301 A P AC
RALEIGH 27605

WILLIAMS, JOHN MARK CDS 074
ECU SCHOOL OF MED. A AC
DEPT. OF SURGERY
GREENVILLE 27858 919 551-4822

WILLIAMS, JOHN POLK 032
1007 S. COLUMBIA ST. #B S
CHAPEL HILL 27514 919 933-0793

WILLIAMS, KENAN BANKS PD 053
413 CARBONTON RD. A L/RT
SANFORD 27330 919 776-3281

WILLIAMS, LARRY THOMAS AN 018
PO BOX 1362 AC
HICKORY 28603 704 322-0870

WILLIAMS, LAWRENCE D. GS 040
624 QUAKER LN., STE. 116B A * AC
HIGH POINT 27262 919 886-4552

WILLIAMS, MARK E. GER /IM 032
UNC, 141 MACNIDER BLDG. AC
CB 7550
CHAPEL HILL 27599 919 966-5945

WILLIAMS, MARTIN KEITH P 074
RT. #3, BOX 147-S A R
GREENVILLE 27858 919 551-2663

WILLIAMS, MICHAEL BRIAN IM /CD 074
ECU SCHOOL OF MEDICINE AC
SECTION OF CARDIOLOGY
GREENVILLE 27858 919 551-4651

WILLIAMS, PAUL FRANKLIN OBG 067
200 MEMORIAL DRIVE A AC
JACKSONVILLE 28546 919 353-2115
FAX 919 353-0126

WILLIAMS, R. BERTRAM, JR. GS /TS 065
1414 MEDICAL CENTER DRIVE A L
WILMINGTON 28401 919 763-7363

WILLIAMS, RANDAL JAMES OPH 018
P. O. BOX 2588 AC
HICKORY 28603 704 322-2050

WILLIAMS, RANDALL WATTS OBG 092
3622 HAWORTH DR. AC
RALEIGH 27609 919 782-1273

WILLIAMS, RANDOLPH MEADE ORS 074
604 MEDICAL DR. A AC
GREENVILLE 27834 919 758-1777
FAX 919 758-7484

WILLIAMS, RHODERICK THOMAS, JR DR 042
114 WOODLAND ROAD AC
ROANOKE RAPIDS 27870 919 535-2121

WILLIAMS, ROBERT DR 092
2305 HATHAWAY ROAD A L/RT
RALEIGH 27608 919 833-5645

WILLIAMS, ROBERT CYRUS, JR. OTO 018
FAIRGROVE CHURCH ROAD AC
BOX 2484
HICKORY 28603 704 322-3725
FAX 704 322-2389

WILLIAMS, ROBERT LEE PD 034
2004 CLAXTON DRIVE AC
WINSTON-SALEM 27107 919 785-0037

WILLIAMS, SAMUEL CLAY IM 034
2637 AUDUBON DR. A L/RT
WINSTON-SALEM 27106 919 722-8919

WILLIAMS, SHELLEY 034
949 S. BRADDOCK AVE. S
PITTSBURG, PA 15221 412 244-8795

WILLIAMS, WILLIAM C. FP 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-4479

WILLIAMS, WILLIAM THOMAS, JR. IM /PD 060
PO BOX 32861 A AC
CHARLOTTE 28232 704 355-3146

WILLIAMSON, JOYCE M. D 060
3535 RANDOLPH ROAD, 101-W A AC
CHARLOTTE 28211 704 364-6110

WILLIAMSON, LINDA J. PD 084
PO BOX 2183 A AC
ALBEMARLE 28002 919 282-2764

WILLIAMSON, ROSSIE MARSHALL GP 024
PO BOX 3385 A L/RT
N. MYRTLE BEACH,SC 29582 803 249-2126

WILLIAMSON, STEVEN G. EM 018
810 FAIRGROVE CHURCH RD. A AC
HICKORY 28601 704 322-0850

WILLIAMSON, WARREN LIGON GS 078
295 WEST 27TH STREET AC
LUMBERTON 28358 919 738-8556

WILLIFORD, JOHN KENNETH FP 043
P. O. BOX 579 A AC
LILLINGTON 27546 919 893-3392

WILLIFORD, PHILLIP MABON IM 034
1131 HUNTINGDON RD. A R
WINSTON-SALEM 27104 919 659-8135

WILLIFORD, ROBERT EARL FP 076
208 FOUST STREET A AC
ASHEBORO 27203 919 625-4000

WILLIFORD, SUSAN ANN KIDWELL IM /ON 040
810 LINDSAY ST. A P AC
HIGH POINT 27262 919 841-2114

WILLINGHAM, SHARON J. G. P 025
2002 S. GLENBURNIE A P AC
PO BOX 2068
NEW BERN 28560 919 636-5503

WILLIS, CHARLES KEITH N 041
1910 N. CHURCH ST. A AC
GUILFORD NEUROLOGICAL ASSOCS.
GREENSBORO 27405 919 273-2511

WILLIS, H.S.K., JR. FP /AM 036
125 W. CENTRAL AVE. A AC
MOUNT HOLLY 28120 704 827-5876

WILLIS, LARRY FRANKLIN OPH 012
335 E. PARKER ROAD AC
MORGANTON 28655 704 433-6220

WILLIS, LINDA LEE 074
116-B N. MEADE ST. A * S
GREENVILLE 27834 919 752-9218

WILLIS, ROBERT FREDERICK FP 026
204 S. MAIN STREET A L
HOPE MILL 28348 919 424-6644

WILLIS, STEPHEN EDGAR FP 074
DEPT. OF FAMILY MED. 4N-78 A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4611

WILLITTS, BRUCE KIRBY OBG 083
P. O. BOX 1808 A AC
LAURINBURG 28353 919 276-4432

WILLS, MATTHEW J. 032
100-8 DICKENS COURT S
CHAPEL HILL 27514 919 932-1529

WILLSON, CHARLES FREDERICK PD 074
300 BETHESDA DR. A * AC
GREENVILLE 27834 919 752-7141

WILMOTH, GREGORY JENNINGS 034
444 LOCKLAND AVE. A S
WINSTON-SALEM 27103 919 773-1480

WILSHIRE, LARRY BRENT OPH 067
825 GUM BRANCH RD., STE. 135 A P * AC
JACKSONVILLE 28540 919 346-2444

WILSON, A. ROSS, JR. OTO 096
2707 MEDICAL OFFICE PLACE A AC
GOLDSBORO 27534 919 735-9146
FAX 919 735-0582

WILSON, B. HADLEY CD 060
1001 BLYTHE BLVD. #300 A AC
CHARLOTTE 28203 704 373-1503

WILSON, CAROLYN SCOTT 032
828 WILKERSON AVE. R
DURHAM 27701 919 684-8111

WILSON, CATHERINE MARIE GYN 011
143 ASHELAND AVENUE A AC
ASHEVILLE 28801 704 258-9191
FAX 704 253-7382

WILSON, CATHY JO AN
BRISTOL ROYAL INFIRMARY R
DEPT. OF ANESTHESIA
BRISTOL BS2, ENGLAND

WILSON, CHARLES HARRISON CDS /TS 041
1317 N. ELM ST., STE. 1 A AC
GREENSBORO 27401 919 373-8245
FAX 919 373-8949

WILSON, CLARENCE LAFAYETTE, II OBG 065
1809 GLEN MEADE ROAD A AC
WILMINGTON 28403 919 763-9833
FAX 919 763-5166

WILSON, EDWARD T. 074
32 UNIVERSITY CONDOMINIUMS S
GREENVILLE 27834 919 752-3720

WILSON, FRANK CRANE ORS 032
UNC, CB #7055 A AC
CHAPEL HILL 27599 919 966-3359

WILSON, FRANK ELMORE PH /GPM 000
ROUTE #3, LEONA ROAD A L/RT
LENOIR CITY, TN 37771 615 986-6315

WILSON, HAROLD A., JR. IM /PUD 034
1053 MILLER ST. A R
WINSTON-SALEM 27103 919 748-4325

WILSON, HENRY VANPETERS, III GS /TS 060
3535 RANDOLPH RD., 201-W A AC
CHARLOTTE 28211 704 364-8100

WILSON, JACK KENNEDY, JR. IM 065
637 S. KERR AVENUE AC
WILMINGTON 28403 919 799-1810

WILSON, JACK KENNEDY, SR. GP 065
1908 HAWTHORNE ROAD A L/RT
WILMINGTON 28403 919 763-5536

WILSON, JAMES STEPHENSON GS 032
PO BOX 15249 A L
DURHAM 27704 919 383-5531

WILSON, LAWRENCE STEVEN U 012
VALDESE DOCTORS' CLINIC A P AC
P. O. BOX 700
VALDESE 28690 704 874-4890

WILSON, MOSES ELLUED OBG 064
PO BOX 8033 AC
140 N. ENGLEWOOD DR.
ROCKY MOUNT 27804 919 937-6611

WILSON, PATRIC ALOYSIUS 032
RR #1, BOX 694-C S
PITTSBORO 27312 919 967-8931

WILSON, ROBERT WAYNE P 065
1404 MEDICAL CENTER DR. A AC
WILMINGTON 28401 919 763-8134

WILSON, STEPHEN GLENN, SR. GP 043
P. O. BOX 158 A L/RT
ANGIER 27501 919 639-2574

WILSON, VIRGIL ARCHIBALD AN 034
4193 DIMHOLT COURT A P AC
WINSTON-SALEM 27104 919 765-8452

WILSON, WILLIAM LENOIR PH 092
WEDGEWOOD APT. #23 A L/RT
740 E. SMALLWOOD DR.
RALEIGH 27605 919 828-2940

WILSON, WILLIAM PRESTON P 032
P. O. BOX 2347 L/RT
BURLINGTON 27216 919 229-6049

WIMMER, JOHN EASTER, JR. NPM 074
DEPT. OF PEDIATRICS A AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4787

WINFIELD, HEBER GREY, III ORS 018
250 18TH ST. CIRCLE, SE AC
HICKORY 28602 704 322-5172
FAX 704 732-1283

WINFIELD, JOHN BUCKNER RHU /IM 032
UNC DEPT. OF MED. AC
932 FLOB, CB 7280
CHAPEL HILL 27599 919 966-4191

WING, RICHARD LEE GYN 060
1901 BRUNSWICK AVE. A AC
CHARLOTTE 28207 704 343-3400
FAX 704 343-3428

WINGERT, JOHN GEORGE OBG 060
2015 RANDOLPH RD. A AC
CHARLOTTE 28207 704 376-3536

WINGFIELD, THOMAS WHETSELL AN 036
3705 EAGLEBROOK DR. AC
GASTONIA 28054 704 864-2499

WINKER, GUYTON JOEL FP 081
206 RESERVATION DR. C
SPINDALE 28160

WINKER, JOEL EDWARD OBG 081
P. O. BOX 1208 A AC
RUTHERFORDTON 28139 704 287-7383
FAX 704 287-8020

WINKER, NANCY C. FP 081
135 HONEYSUCKLE DR. AC
RUTHERFORDTON 28139 704 286-0506

WINSLOW, FRANCIS EDWARD, JR. PD 092
3124 BLUE RIDGE RD. STE. 102 AC
RALEIGH 27612 919 782-0021

WINSLOW, JAMES ELBERT FP 073
609 PROFESSIONAL DR. AC
ROXBORO 27573 919 599-9258

WINSLOW, JAMES WEEKS FP 033
101 CLINIC DRIVE AC
TARBORO 27886 919 823-2105

WINSLOW, ROBERT BROWN PS /GS 092
2500 BLUE RIDGE RD. #301 AC
RALEIGH 27607 919 571-8090

WINSTEAD, JOHN LINDSAY, JR. GS 074
SUITE #1, MEDICAL PAVILION A AC
1800 W. FIFTH ST.
GREENVILLE 27834 919 752-2159

WINTER, KENNETH HOWE R 041
3307 WALDRON DRIVE A AC
GREENSBORO 27408 919 855-8972

WINTERS, RICHARD RIZER WALKER PS 025
1425 GLENBURNIE RD. AC
NEW BERN 28560 919 637-6800

WINTON, ROBERT EMMETT P 032
1811 CHAPEL HILL RD. AC
DURHAM 27707 919 493-4397

WISE, DANIEL EDWIN CD /IM 060
1718 E. 4TH ST. #501 AC
CHARLOTTE 28204 704 347-2024

WISE, FRED EUGENE, JR. DR 060
1350 S. KINGS DRIVE A L
CHARLOTTE 28207 704 372-8750

WISE, JOHN EDNEY IM 018
1624 N. CENTER STREET AC
HICKORY 28601 704 328-2094

WISSING, JOEL ALLEN R 060
CHARLOTTE RADIOLOGY A AC
PO BOX 36937
CHARLOTTE 28236 704 333-0224

WITHERINGTON, DEXTER THOMPSON GS 054
P. O. BOX 1316 A L/RT
KINSTON 28501 919 522-1626

WITHERS, ABNER CARR FP 012
BOX 38 AC
DREXEL 28619 704 437-3694

WITHERS, LARRY DALE AN 026
150 ELLERSLIE DR. AC
FAYETTEVILLE 28303 919 864-5117

WITHERS, SYDNOR TERRY, JR. IM /FP 065
5305 WRIGHTSVILLE AVE. AC
BLDG 5305-E
WILMINGTON 28403 919 791-5426

WITHERS, SYDNOR TERRY, SR. D 054
905 N. QUEEN STREET A P * AC
KINSTON 28501 919 523-3289

WITHROW, JERRY WAYNE FP 060
KAISER PERMANENTE AC
5950 FAIRVIEW RD.
CHARLOTTE 28210 704 551-4200

WITTEN, ERNEST ROBERT SIDNEY IM 011
80 WEMBLEY RD. L/RT
ASHEVILLE 28804 704 253-5707

WITTENBERG, PETER HERBERT PTH 036
GASTON MEM. HOSP. AC
PO BOX 1747
GASTONIA 28053 704 866-2851

WITTERHOLT, SUZANNE T.J. 032
7A MANNSFIELD R
PITTSBORO 27312 919 966-5711

WITWER, TIMOTHY SLAYTON IM /FP 070
1207 N. ROAD ST. A AC
ELIZABETH CITY 27909 919 335-4351

WOELFEL, JAMES THOMAS GS 006
P. O. BOX 122 AC
BANNER ELK 28604 704 898-4937

WOLANSKI, TERRENCE PHILIP PUD /IM 067
296 DOCTORS DR. AC
JACKSONVILLE 28546 919 353-1811

WOLFBERG, BERNARD P 040
301 N. LINDSAY AC
HIGH POINT 27262 919 882-4898

WOLFE, ANN FIERRO PD 092
6912 HUNTERS WAY AC
RALEIGH 27615 919 733-3816

WOLFE, HAROLD EUGENE D 096
117 CASHWELL DRIVE A L/RT
GOLDSBORO 27534 919 735-3646

WOLFE, JOHN RICHARD IM /RHU 034
3030 LYNDHURST AVE. AC
WINSTON-SALEM 27103 919 760-3498

WOLFE, WALTER GEORGE CDS /TS 032
BOX 3507, DUMC A AC
DURHAM 27710 919 684-4117

WOLFF, GEORGE THOMAS FP 041
301 E. WENDOVER AVE., STE. 310 * AC
GREENSBORO 27401 919 379-1156
FAX 919 370-0442

WOLFF, MICHAEL R. U 001
1610 VAUGHN RD. A AC
BURLINGTON 27215 919 227-2761

WOLFMAN, NEIL TURNER DR 034
BOWMAN GRAY, DEPT. OF RAD. AC
WINSTON-SALEM 27103 919 748-2471

WOLFORD, JERALD F. PTH 065
6212 N. BRADLEY OVERLOOK AC
WILMINGTON 28403 919 323-6149

WOLFSON, SORRELL L. TR 080
2425 JAKE ALEXANDER BLVD., N AC
SALISBURY 28144 704 636-6432

WOLICKI, KAROL T. OTO 041
321 W. WENDOVER AVE. A AC
GREENSBORO 27408 919 379-9445

WOLOZIN, MARK WILLIAM IM /CD 060
2330 RANDOLPH RD. AC
CHARLOTTE 28207 704 377-0575

WOLTZ, JOHN HENRY EARLY GYN 060
916 CHEROKEE RD. A L/RT
CHARLOTTE 28207 704 372-6113

WOLTZ, LUCY H. P 034
420 MAGNOLIA BRANCH DR. #8 A R
WINSTON-SALEM 27104 919 765-4139

WOOD, JOHN CROMWELL IM 001
316 N. GRAHAM-HOPEDALE RD. A AC
BURLINGTON 27215 919 227-3621

WOOD, KENNETH ERVIN ORS 060
2600 EAST 7TH ST. A AC
CHARLOTTE 28204 704 372-8750

WOOD, SHERROD NEWBERRY GP 042
424 BOND ST. S/RT
ENFIELD 27823 919 445-3263

WOOD, STACEY A., JR. OBG 060
2015 RANDOLPH RD. AC
CHARLOTTE 28207 704 376-3536

WOOD, WILLIAM BAINSTER IM /PUD 032
UNC, DEPT. OF MED, CB 7020 AC
CHAPEL HILL 27599 919 966-7668
FAX 919 966-7524

WOOD, WILLIAM LUPTON, SR. GP 086
P. O. BOX 367 A L/RT
YADKINVILLE 27055 919 679-8689

WOODALL, HAL BREEN IM 098
BOX 878 A P AC
KENLY 27542 919 284-5151

WOODALL, LEONARD SCHMICH GYN 051
711 NORTH STREET A AC
SMITHFIELD 27577 919 934-7696

WOODARD, BARNEY LELON GP 051
P. O. BOX 129 A L
KENLY 27542 919 284-3080

WOODARD, JEAN PRATZ 032
203 BRANSON ST. #D S
CHAPEL HILL 27514 919 933-6645

WOODARD, JERRY CLEON GE /IM 098
1700 S. TARBORO ST. A AC
WILSON 27893 919 291-1300

WOODARD, LAWRENCE, JR. 032
3553 MAYFAIR ST., APT. 201 S
DURHAM 27707 919 419-0207

WOODARD, MARSHALL WAYNE OPH 011
607 FLATIRON BUILDING A L/RT
ASHEVILLE 28801 704 252-5668

WOODARD, PAMELA K. 032
324 NORTHAMPTON PLAZA A R
CHAPEL HILL 27514 919 966-4131

WOODARD, PAUL RICHARD AN 092
1825 ST. MARY'S ST. A AC
RALEIGH 27608 919 755-8000

WOODARD, SABRA ALDERMAN R /NM 092
1825 ST. MARY'S STREET A AC
RALEIGH 27608 919 755-3023

WOODARD, WARDEN LEWIS, III IM /ON 060
217 TRAVIS AVE. AC
CHARLOTTE 28204 704 372-3350
FAX 704 373-0943

WOODBURY, MARGARET H. 032
602 1/2 S. COLUMBIA ST. APT. C S
CHAPEL HILL 27514 919 968-6077

WOODHOUSE, SHERRY L. PTH 014
PO DRAWER 680 AC
LENOIR 28645 704 758-2114

WOODRING, PHYLLIS MCGEE AN 034
286 TORRANCE DR. AC
WINSTON-SALEM 27106 919 768-5441

WOODRUFF, LEON FESTUS, JR. OBG 092
4420 LAKE BOONE TR., STE. 303 AC
RALEIGH 27607 919 781-5510

WOODRUFF, RALPH DUTTON PTH 034
BOWMAN GRAY, DEPT. OF PATH. AC
WINSTON-SALEM 27103 919 748-4311

WOODRUFF, WILLIAM WALTER, III DR 040
PO BOX 5007 AC
HIGH POINT 27262 919 884-6037

WOODRUM, GEORGE ORRIS AN 034
2220 ELIZABETH AVE. A R
WINSTON-SALEM 27103 919 723-2360

WOODS, JAMES WATSON, JR. CD /IM 032
1920 DAIRYLAND RD. L/RT
CHAPEL HILL 27516 919 942-4624

WOODS, JON POINTON
7154 AMHERST AVE. A R
ST. LOUIS, MO 63130

WOODS, THOMAS J. CROFFORD OPH /FP 082
WOODSIDE PROF. BLDG. A AC
CLINTON 28328 919 592-7860

WOODWARD, ROBERT WARREN OBG 079
517 WOODROW ST. AC
PO BOX 448
REIDSVILLE 27320 919 342-6161

WOODWORTH, ALFRED HERMAN FP /EM 065
224 SEAGULL LANE AC
WILMINGTON 28403 919 392-3216

WOODWORTH, THOMAS BELL FP /OM 026
1657 OWEN DRIVE AC
FAYETTEVILLE 28304 919 484-6540

WOODY, JOE HARRIS OPH 060
4335 COLWICK RD. A P AC
CHARLOTTE 28211 704 364-7400

WOODY, JOHN W. AUSTIN FP 075
900 LYNN ROAD A L/RT
TRYON 28782 704 859-9483

WOODY, JONATHAN DEWEY 034
244 OAKWOOD COURT A S
WINSTON-SALEM 27103 919 722-6401

WOOTEN, CECIL WILLIAM, JR. GP 054
P. O. BOX 1577 L/RT
KINSTON 28501 919 523-3496

WOOTEN, ELEANOR JANE H. PD /PH 092
904 WILLIAMSON DRIVE L/RT
RALEIGH 27608 919 832-4097

WOOTEN, JOHN DAVID, III PD /CHN 034
BOX 504, 300 S. HAWTHORNE RD. A R
WINSTON-SALEM 27103 919 748-2317

WOOTEN, JOHN LEMUEL ORS 074
1807 CIRCLE DR. A L/RT
GREENVILLE 27834 919 752-4613

WOOTEN, STEPHEN LAMONT ORS /HS 074
622 MEDICAL DR. A AC
GREENVILLE 27834 919 752-4613

WOOTEN, WAYNE BROWN DR 080
401 MOCKSVILLE AVE., STE. 201 AC
SALISBURY 28144 704 633-1023

WORDEN, NEIL ASHTON FP 026
PO BOX 529 A AC
HOPE MILLS 28348 919 483-0463

WORKMAN, JOSEPH BERKELEY NM /IM 032
219 COUNTRY CLUB DRIVE A AC
DURHAM 27712 919 383-5319

WORLAND, DAVID ERIC AN 041
1816 PEMBROKE RD., STE. #2 AC
GREENSBORO 27408 919 272-3720

WORLEY, GORDON, III PD 032
307 BIRCH CIRCLE AC
CHAPEL HILL 27514 919 683-6890

WORLEY, JAMES HARR GS 011
401 VANDERBILT ROAD A L/RT
ASHEVILLE 28803 704 254-2361

WORTH, THOMAS CLARKSON R 092
500 LAKE BOONE TRAIL A L/RT
RALEIGH 27608 919 787-6449

WORTMAN, JAMES EDWARD IM /ON 065
1912 MEETING COURT AC
WILMINGTON 28401 919 251-0811

WORTMAN, WILLIAM JEROME, JR. GYN /OBS 060
2711 RANDOLPH RD. #309 AC
CHARLOTTE 28207 704 376-1580

WOTRING, JAMES WILLIAM, JR. OBG 018
P. O. BOX 38 A AC
HICKORY 28603 704 322-4140
FAX 704 322-3767

WRAY, DANNAH WILDE 032
3100 COACHAMN'S WAY * S
DURHAM 27705 919 489-3236

WRAY, RICHARD HENRY, III TS /GS 016
15 MEDICAL PARK AC
MOREHEAD CITY 28557 919 247-2101

WRENCH, JOHN DEAN DR 032
2624 BEXLEY AVE. R
DURHAM 27707 919 684-2711

WRENN, JOHN JEFFRIES U 041
200 E. NORTHWOOD, STE. 302 A C
GREENSBORO 27401 919 378-4176

WRENN, RICHARD NICKLES ORS 060
CAROLINAS MED. CTR. A AC
PO BOX 32861
CHARLOTTE 28232 704 338-4257
FAX 704 355-6041

WRIGHT, DAVID ORLO FP 021
CHOWAN MEDICAL CENTER AC
EDENTON 27932 919 482-2116

WRIGHT, ELIZABETH ANN N 049
PO BOX 1718 A AC
STATESVILLE 28677 704 878-6467

WRIGHT, EUGENE EDWARD, JR. IM 026
1738 METROMEDICAL DR. A AC
FAYETTEVILLE 28304 919 323-2503

WRIGHT, JAMES RHODES OTO /OPH 092
3319 WHITE OAK RD. L
RALEIGH 27609 919 834-8251

WRIGHT, JAMES THURMAN GP 007
804 LATHAM ST. A L
BELHAVEN 27810 919 943-2375

WRIGHT, JOHN HERMAN PS /GS 034
STE. 774, FORSYTH MEDICAL PK. A AC
1900 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 765-8620

WRIGHT, PAUL HARLAN ORS 032
1901 HILLANDALE ROAD A P * AC
DURHAM 27705 919 383-1511

WRIGHT, RICHARD BRANDON, JR. FP /AN 080
902 WILTSHIRE VILLAGE A L/RT
SALISBURY 28144 704 636-1602

WRIGHT, TONY MARRONE 032
B-3 THE VILLAGES A S
SMITH LEVEL RD.
CARRBORO 27510 919 967-7963

WRIGHT, WALTER LEE OPH 054
1908 ELEANOR ST. A AC
KINSTON 28501 919 522-1611

WU, RICHARD CHAO-CHUNG 032
116 WELLINGTON AVE. A S
SALISBURY 28144 704 636-7335

WU, WALLACE CHI LI GE /IM 034
300 S. HAWTHORNE RD. AC
WINSTON-SALEM 27103 919 748-4603

WYBLE, LANCE EDWARD NPM /PD 041
PO BOX 29526 A C
THE WOMENS HOSP. OF GREENSBORO
GREENSBORO 27429 919 379-3963

WYCHE, JOSEPH THOMAS FP 024
RT. #7, BOX 30 A L/RT
WHITEVILLE 28472

WYKER, ROBERT T. ORS 092
PO BOX 10707 A AC
RALEIGH 27605 919 781-5600

WYMAN, JOHN SHELDON EM /IM 045
715 FLEMING ST. RT
HENDERSONVILLE 28739 704 693-6522

WYMAN, ROBERT WEST FP 051
110 WADDELL STREET AC
SELMA 27576 919 965-3055

WYNIA, VIRGIL HOWARD CD /IM 092
3020 NEW BERN AVE. #420 A AC
RALEIGH 27610 919 833-5111

WYNN, TONJA MICHELLE 032
1616 PIEDMONT AVE. NE A-9 S
ATLANTA, GA 30324 404 876-7367

WYSOR, WILLIAM GEOFFREY, JR. IM /GE 032
304 ELLIOTT RD. AC
CHAPEL HILL 27514 919 942-6162

YAKEL, DONALD L. 034
3010 KENNEDY DR. S
SALT LAKE CITY, UT 84108

YAMBOR, MARI MARTHA P 092
PO BOX 2444 C
CHAPEL HILL 27515 919 881-5456

YANCY, WILLIAM SAMUEL PD /ADL 032
2609 N. DUKE ST., STE. 801 A AC
DURHAM 27704 919 477-3434

YANG, CLAIRE CHENG U 034
1712 ELIZABETH AVE. R
WINSTON-SALEM 27103 919 748-2011

YAP, ELSA DUMAUG PTH 013
CABARRUS MEMORIAL HOSPITAL AC
CONCORD 28025 704 788-5987

YAP, MARK ANASTACIO DR 034
806 BRICKWOOD PL. A R
WINSTON-SALEM 27127 919 748-4316

YARBOROUGH, JESSE GRAHAM, JR. AN 036
RT. 1, BOX 125 AC
CATAWBA COVE RD.
BELMONT 28012

YARBOROUGH, MARK A. U 011
1 DOCTOR'S PARK A AC
ASHEVILLE 28801 704 253-5314

YARBOROUGH, MICHAEL FRANCIS GS /TS 092
3400 EXECUTIVE DR. STE. 104 A AC
PO BOX 17200
RALEIGH 27619 919 876-2732
FAX 919 878-0121

YARBROUGH, WENDELL GRAY 032
1245 CRANEBRIDGE PL. R
CHAPEL HILL 27514 919 924-2447

YARLEY, DEWEY HOBSON IM 032
2609 N. DUKE ST., STE. 205 A AC
DURHAM 27704 919 471-8481

YATES, MARK CHARLES ORS 041
1505 WESTOVER TERR. A AC
GREENSBORO 27408 919 275-0927

YEATTS, ROBERT P. OPH /PSF 034
300 S. HAWTHORNE RD. * AC
DEPT. OF OPH.
WINSTON-SALEM 27103 919 748-4091

YELLIG, EDWARD BOOTH IM 092
3320 WAKE FOREST RD. * AC
RALEIGH 27609 919 878-0347

YELTON, BLANE WESLEY, JR. CD 029
1642 NATIONAL HIGHWAY AC
THOMASVILLE 27360 919 889-6802

YEN, STEPHANIE P. 032
BOX 2875, DUMC A S
DURHAM 27710 919 684-6124

YENNEY, MATTHEW F.J., JR. R /NM 008
3621 WINSTEAD RD. A AC
ROCKY MOUNT 27804 919 332-1156

YEVAK, RICHARD JOHN, JR. AN 032
DUMC, BOX 3094 R
DURHAM 27710 919 681-2924

YODER, CHARLES DEWAYNE PD /NPM 011
50 DOCTOR'S DR., STE. 304M AC
ASHEVILLE 28801 704 253-1998

YOFFE, ELIZABETH HARRER ON /HEM 092
3100 DURALEIGH RD. AC
RALEIGH 27612 919 781-7070

YOFFE, MARK ON /HEM 092
PO BOX 30098 A AC
RALEIGH HEM/ONCOLOGY CLI.
RALEIGH 27622 919 781-7070

YOHAY, DANIEL ALAN 032
8 DUNMORE CT. R
DURHAM 27713

YONGUE, JUDITH S. P 074
107-C COMMERCE ST. * AC
GREENVILLE 27858 919 355-2768

YOPP, JAMES DENNIE, JR. CD /IM 034
602 FORSYTH MEDICAL PARK A P AC
WINSTON-SALEM 27103 919 765-4871

YORK, SHELLEY CLYDE, JR. GS 029
1300 LEXINGTON AVENUE AC
THOMASVILLE 27360 919 475-2376

YOUNG, CHARLES GIBSON IM /OM 079
403 W. HARRISON STREET AC
P. O. BOX 359
REIDSVILLE 27320 919 349-5536

YOUNG, CHARLES RICHARD GP 000
491 BILTMORE AVE. R
ASHEVILLE 28804 704 258-0670

YOUNG, CLINTON DRIVER PUD /A 041
1018 N. ELM STREET A AC
GREENSBORO 27401 919 275-7238

YOUNG, DANIEL TEST CD /IM 032
UNC,338 CLINICAL SCI. 229-H AC
CHAPEL HILL 27599 919 966-4602

YOUNG, DAVID ALEXANDER P /PYA 092
1546 IREDELL DR. A L
RALEIGH 27608 919 833-4146

YOUNG, JACK LINK N 063
PO BOX 1749 AC
PINEHURST 28374 919 295-6868
FAX 919 295-1514

YOUNG, JOHN ADAM, II OPH 060
1600 E. THIRD STREET A P AC
CHARLOTTE 28204 704 372-3300

YOUNG, KYLE ALLEN DR 041
P. O. BOX 13005 A AC
GREENSBORO 27415 919 379-4144

YOUNG, MICHAEL HARRILL N /IM 011
50 DOCTOR'S DR., STE. 190W A P AC
ASHEVILLE 28801 704 252-6066

YOUNG, NOEL WILLIAM, JR. OPH 032
2609 N. DUKE STREET AC
DURHAM 27704 919 471-8495

YOUNG, PETER RUSSELL GS 041
1317 N. ELM ST., STE. #5 A AC
PO BOX 10037
GREENSBORO 27401 919 274-8444

YOUNG, RICHARD L. ORS 082
603 BEAMAN ST. A P AC
CLINTON 28328 919 592-5004

YOUNG, ROBERT LASSITER, JR. PD 078
103 WEST 27TH STREET AC
LUMBERTON 28358 919 739-3318
FAX 919 738-6033

YOUNG, W. P. WILTSEE ADL /PD 032
STUDENT HEALTH SERVICE,CB 7470 AC
CB 7472
CHAPEL HILL 27599 919 966-6570

YOUNG, WILLIAM BEAUREGARD IM /CD 098
1133 WOODLAND DR. A I,/RT
WILSON 27893 919 291-1300

YOUNG, WILLIAM GLENN, JR. TS /CDS 032
DUKE UNIV. MED. CTR. A AC
DURHAM 27710 919 684-2037

YOUNG, WILLIAM LEE, III FP 018
210 13TH AVENUE PLACE, N.W. A AC
HICKORY 28601 704 328-2941

YOUNGBLOOD, ROBERT WATKINS GS /TS 074
ECU SCHOOL OF MEDICINE A * AC
DEPT. OF SURGERY
GREENVILLE 27858 919 551-5418

YOUNGS, FRANKLIN JAY R 098
113 RIPLEY RD. A AC
WILSON 27893 919 399-2240

YOUNIS, MARK SHARBEL 032
6 GRAY FOX CT. R
DURHAM 27713 919 489-8895

YOUNT, ERNEST HARSHAW, JR. IM 034
2800 GREENWICH ROAD A L/RT
WINSTON-SALEM 27104 919 768-5702

YOUNT, JAMES ALVIN CD /CD 060
3535 RANDOLPH ROAD A AC
CHARLOTTE 28211 704 365-0760

YOUNT, WILLIAM JAY RHU /AI 032
UNC, 932 FLOB BLDG. CB 7280 AC
CHAPEL HILL 27599 919 966-4191
FAX 919 966-1739

YOWELL, ROBERT KLUTTZ OBG 032
2609 N. DUKE ST., STE. 204 A AC
DURHAM 27704 919 471-8402
FAX 919 477-7428

YUDELL, ROBERT BENJAMIN OPH 060
309 S. LAUREL AVENUE A AC
CHARLOTTE 28207 704 372-4380
FAX 704 358-0624

YUE, BYONG HAK GS 065
1810 GLEN MEADE ROAD AC
WILMINGTON 28403 919 762-1730

YUN, PAUL TAJEN GP 059
PO BOX 1284 AC
MARION 28752 704 652-3351

YURKO, ANTHONY ANDREW GS 075
ROUTE #1, BOX 440 A RT
TRYON 28782 704 859-5133

YURKO, JOHN EVANS GS 016
15 MEDICAL PARK AC
MOREHEAD CITY 28557 919 247-2101

ZAGORIA, RONALD JAY R 034
300 S. HAWTHORNE RD. A AC
DEPT. OF RADIOLOGY
WINSTON-SALEM 27103 919 748-4316

ZAMMIT, JOSEPH LUKE FP 001
4002 WHITE TAIL CT. C
HIGH POINT 27260 919 246-5161

ZAMMIT, ROBERT PAUL OBG 034
406 FORSYTH MEDICAL PARK A P AC
WINSTON-SALEM 27103 919 765-4533

ZANOLLI, MICHAEL DOMINIC D 034
300 S. HAWTHORNE RD. A AC
WINSTON-SALEM 27103 919 748-2768

ZARATE, RENATO IM 034
PO BOX 597 A AC
WALNUT COVE 27052 919 591-4306

ZARITZKY, DAVID RON R 040
P. O. BOX 6146 AC
HIGH POINT 27262 919 887-9341

ZARZAR, DAVID PAUL 032
S-4 THE VILLAGES APTS. A S
CARRBORO 27510 919 942-0294

ZARZAR, MICHAEL NAKHLEH P 092
3153-G ESSEX CIR. A AC
GLENWOOD PROF. VILL.
RALEIGH 27608 919 782-1555

ZARZAR, NAKHLEH PACIFICO P 092
3153 GLENWOOD PROF. VILL. A AC
BLDG. H
RALEIGH 27608 919 782-1555

ZARZAR, NICHOLAS S. P 032
4215 TALCOTT DR. A C
DURHAM 27707 919 382-0135

ZASTROW, JOSEPH F. FP 060
PO BOX 18248 R
CHARLOTTE 28218 704 537-0020
FAX 704 537-0028

ZBAN, WILLIAM MATTHEW 034
4755 COUNTRY CLUB RD. 113-L R
WINSTON-SALEM 27104 919 768-3691

ZBINDEN, LOUIS H., III 000
1526 LILAC RD. R
CHARLOTTE 28209 704 355-2000

ZEE, WENDELL J. AN 098
P.O. BOX 7055 A AC
WILSON 27893 919 291-1700

ZEEDICK, JOHN FRANCIS IVAN AN /PUD 051
4151 OLD GEORGETOWN RD. WEST A AC
KERSHAW, SC 29067 803 475-8749

ZEITLER, KENNETH DALE HEM /ON 092
PO BOX 30098 A AC
RALEIGH HEM/ONCOLOGY CLI.
RALEIGH 27622 919 781-7070

ZEKAN, PATRICIA JOAN ON /IM 034
250 CHARLOIS BLVD. AC
WINSTON-SALEM 27103 919 768-4730

ZELLER, DONALD JOHN FP 092
3100 BLUE RIDGE RD., STE. 202 AC
RALEIGH 27607 919 782-0146
FAX 919 571-9768

ZELLINGER, MICHAEL JAY CD /IM 092
WAKE HEART ASSOCIATES AC
PO BOX 14427
RALEIGH 27620 919 231-8253

ZELLNER, ERIC EUGENE FP /EM 013
103 COUNTRY CLUB DR. A P AC
CONCORD 28025 704 788-1140

ZELLNER, ERIC G. B. PM 026
PO BOX 64614 A AC
FAYETTEVILLE 28306 919 323-6036

ZELLNER, PAULA WATKINS DR 026
329 SUMMERTIME RD. A P AC
FAYETTEVILLE 28303 919 323-2012

ZELNERONOK, NICHOLAI U 033
101 CLINIC DR. A C
TARBORO 27886

ZEMP, CHARLES H., JR. PD 014
NAUCARE-2, 2070 NORTHBROOK AC
NORTHBROOK CTR., STE. A20
N. CHARLESTON, SC 29418

ZEOK, JOHN VICTOR CDS /TS 092
3400 EXECUTIVE DR. STE. 102 A AC
RALEIGH 27609 919 872-8080

ZERBY, GLENN ALAN EM /IM 092
143 NICKLAUS DR. A AC
GARNER 27529 919 783-3038

ZETTL, MATTHEW LEE ORS 016
15 MEDICAL PARK AC
MOREHEAD CITY 28557 919 247-2101

ZICH, MICHAEL JOHN OBG 043
608 TILGHMAN DR. A P AC
DUNN 28334 919 892-4092

ZIMMERMAN, GERALD DAVID R /NM 060
MERCY HOSPITAL A AC
2001 VAIL AVE.
CHARLOTTE 28207 704 379-5860

ZIMMERN, SAMUEL H. CD /IM 060
1001 BLYTHE BLVD., #300 A AC
CHARLOTTE 28203 704 373-1503

ZINICOLA, DANIEL F. GP 007
PO BOX 686 AC
PLYMOUTH CLINIC
PLYMOUTH 27962 919 793-4155

ZIPF, ROBERT EUGENE, JR. PTH /FOP 064
NASH GENERAL HOSPITAL AC
ROCKY MOUNT 27801 919 443-8043

ZIRKER, THOMAS A. PTH 041
801 GREEN VALLEY RD. A AC
GREENSBORO 27408 919 691-6839

ZOLLINGER, RICHARD WILLIAM, II TS /CDS 060
1900 RANDOLPH RD. #216 A AC
CHARLOTTE 28207 704 375-8413
FAX 704 372-3109

ZOLOVICK, GEORGE THOMAS 034
2050 CRAIG ST. APT. 15 A S
WINSTON-SALEM 27103

ZORNOSA, JOHN PAUL 034
2344 WESTOVER DR. R
WINSTON-SALEM 27103 919 748-2011

ZOTA, RAMNIKLAL JECHAND FP 047
116 CAMPUS AVENUE AC
RAEFORD 28376 919 875-8106

ZUBER, THOMAS JOHN FP /GER 051
PO BOX 699 A * AC
BENSON 27504 919 894-2011

ZUCKER, JOSEPH ORS 060
1350 S. KINGS DR. AC
CHARLOTTE 28207 704 342-8343

ZUGER, JAMES HERMAN R 060
CHARLOTTE RADIOLOGY A AC
PO BOX 36937
CHARLOTTE 28236 704 365-0343

ZUKOSKI, ROBERT MICHAEL GS /GYN 010
904 HOWE ST., NORTH A P AC
SOUTHPORT 28461 919 457-5292

ZWERLING, CHARLES SAMUEL OPH /A 090
GOLDSBORO EYE CLINIC AC
2709 MEDICAL OFFICE PL.
GOLDSBORO 27530 919 736-3937

ZWILLING, GREGORY VINCENT 034
2035 W. ACADEMY ST. A S
WINSTON-SALEM 27103 919 724-3132

RESIDENT/FELLOW MEMBERS

By authority of the Executive Council, this special class of membership requires no component society membership, although component society membership is encouraged.

BERNETHY, MARY LISA D 032
222 BARCLAY RD.
CHAPEL HILL 27516 919 932-1453

BSON, PAUL ANTONY 032
2600 STUART DR.
DURHAM 27707 919 684-6968

DAMS, MELANIE PD
425 S. HUBBARDS LN. #376 A
LOUISVILLE, KY 40207 502 894-0903

HEARNE, PAUL MICHAEL 032
2329 ENGLEWOOD AVE.
DURHAM 27705 919 684-8111

HLUWALIA, JASJIT S. IM 032
60 GLEN ROAD #110
BROOKLINE, MA 02146

HMAD, ZIA MOIZUDDIN 034
2930-A WALNUT FOREST CT. A
WINSTON-SALEM 27103 919 748-2605

HMED, NADEEM 011
200-16 ROLLINS DR.
GREENVILLE 27834 919 355-0576

HN, YONG HUI 060
1540 GARDEN TERRACE #305
CHARLOTTE 28203 704 338-2000

LEXANDER, KERRY ANTHONY 060
CAROLINAS MEDICAL CENTER
PO BOX 32861
CHARLOTTE 28232 704 338-2000

LLBERT, JOHN RAYMOND
2801 JAMESTOWN WAY
JACKSON, MS 39211

LLEN, LEE F. 032
5519 WESCOTT PLACE
DURHAM 27712 919 383-4409

LLF, BRYAN EWING OPH 032
3120 OXFORD DR. A
DURHAM 27707

NSTADT, MARK PETER GS 032
803 LEON ST. A
DURHAM 27704 919 684-6012

RMON, CARMEL N 065
311 S. LASALLE ST. APT. 15F A
DURHAM 27705 919 684-8111

RRENDELL, WANDA BERTEL PTH /FOP 074
102-F VICTORIA COURT
GREENVILLE 27834 919 551-4495

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103 POLK'S TRAIL
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WINSTON-SALEM 27103 919 748-2011

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2367 LYNDHURST AVE.
WINSTON-SALEM 27103 919 748-2011

KENTER, KEITH ORS 032
3030 GLENDALE A
DURHAM 27704 919 471-4704

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316 SEVERIN STREET A
CHAPEL HILL 27516 919 966-4131

KERAM, STEVAN 032
316 SEVERIN ST. A
CHAPEL HILL 27516 919 966-5711

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UNC, CB 7110,5039 OLD CLI.BLDG
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CHAPEL HILL 27599 919 966-2276

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608 WINDSONG LN.
DURHAM 27713 919 684-8111

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63 WILLOW WAY
CHAPEL HILL 27516 919 684-3742

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971 RIDGEVIEW AVE. A
WINSTON-SALEM 27127 919 379-3900

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704 W. CORNWALLIS RD. A
DURHAM 27707 919 493-6525

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839 SCALEYBARK RD. #11-M A
CHARLOTTE 28209 704 355-3181

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304 HILLSIDE DR.
GREENSBORO 27401 919 379-4035

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119 COBBLESTONE DR.
CHAPEL HILL 27516 919 966-3080

KREGE, JOHN HENRY 032
220 ELIZABETH ST., APT. A17
CHAPEL HILL 27515 919 966-4131

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DUMC, VA HOSP. BLDG. 16
DURHAM 27705 919 286-6811

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744 HOLLIS RD. A
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803 PARK RIDGE #A5
DURHAM 27713 919 684-3300

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2273 WOODSONG LN. *
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4600 UNIVERSITY DR., APT. 602
DURHAM 27707 919 684-8111

LEFEVER, NANCY QUINN FP
1601-B OWEN DR.
FAYETTEVILLE 28304 919 323-1152

LEFKOWITZ, JERRY B. HEM /PTH 032
207-10 MELVILLE LOOP A
CHAPEL HILL 27514 919 966-3311

LENDERMAN, MARK DAY 034
2427 CHEROKEE LN.
WINSTON-SALEM 27103 919 777-0028

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114 HEMLOCK DR. A
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300 S. HAWTHORNE RD. A
WINSTON-SALEM 27103 919 748-2011

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1793 JAMESTON DR. A
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7323 MATTHEWS RD.
DURHAM 27712 919 471-3921

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3108 STANFORD DR.
DURHAM 27707 919 490-4477

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2270 SUNDERLAND RD. #11A
WINSTON-SALEM 27103 919 748-2011

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1711 SHAWNEE ST. A
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CHAPEL HILL 27514 919 966-1461

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ANDERSON, SC 29621 803 261-1475

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10321 CRESTMOOR DR. A
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201 DRIFTWOOD LANE
WINSTON-SALEM 27104 919 748-2011

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MCCALMONT, TIMOTHY HUGH /D 034
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110 PERSIMMON HILL RD.
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910 CONSTITUTION DR. #419 A *
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MCGEE, MARK FLETCHER P 032
1511 ECHO ROAD A
DURHAM 27707 919 493-1352

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212 E. BESSEMER AVE. #A
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7307-106 CALIBRE PARK DR. A
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1315 MORREENE RD. #6J
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910 CONSTITUTION DR. 3305
DURHAM 27705 919 684-5112

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2730 MONTGOMERY ST. A
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106 BASKERVILLE CIRCLE
CHAPEL HILL 27514 919 286-3232

MOORE, CAROL ANN 074
106 SCALES PL. #M-5 A
GREENVILLE 27834 919 753-2015

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3227 COACHMAN'S WAY
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WINSTON-SALEM 27103 919 748-6249

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WINSTON-SALEM 27103 919 748-2011

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112 HIDDEN VALLEY DR.
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104 BRADFORD PL. A
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NOAH, TERRY LEE PD /PDP 032
1803 PATHWAY DR.
CARRBORO 27510 919 966-1055

NOECKER, ROBERT J. 032
110 MELVILLE LOOP APT. 17 A
CHAPEL HILL 27514 919 933-6668

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10-B POPLAR ST.
CHAPEL HILL 27516 919 929-7120

ORCUTT, JAMES MICHAEL IM 060
8004 SHOREWOOD DR. A
CHARLOTTE 28277 704 355-2000

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7035-F BRANDEMERE LANE
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105 GREEN DRIVE A
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PO BOX 1343 A
ALBEMARLE 28002 704 982-8650

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1820 ALYSSUM PL.
WINSTON-SALEM 27127 919 993-3189

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121 BUCKINGHAM RD.
EASLEY, SC 29640 919 945-2087

PASSANNANTE, ANTHONY N. 032
DEPT. OF ANES. CB 7010 A
NC MEMORIAL HOSP.
CHAPEL HILL 27599 919 966-5131

PASSERO, NICHOLAS JOHN 034
181 DALEWOOD DR., APT. #9
WINSTON-SALEM 27104 919 768-0477

PATSELAS, TIMOTHY N. 074
206 KIRKLAND DR.
GREENVILLE 27858 919 551-4100

PATTERSON, JAN LOUISE 032
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CHAPEL HILL 27599 919 966-2491

PAYNE, THOMAS ARTHUR 060
430 QUEENS RD., APT. 621
CHARLOTTE 28207 701 333-0031

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6811 OLD CANTON RD. #2003
RIDGELAND, MS 19157 601 977-9725

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PFUNDSTEIN, JOANN 032
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2077 QUEEN ST.
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PRICHARD, ELIZABETH HYDE PTH 034
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3229 LOCHINVAR
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910 WATSON AVE.
WINSTON-SALEM 27103 919 748-4498

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29-A, 300 WOODCROFT PKWY.
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139 MALLARD COURT
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706 FRIAR TUCK ROAD A
WINSTON-SALEM 27104 919 748-2011

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206 DUNHILL DR.
DURHAM 27713 919 722-5918

RILEY, KATHLEEN ANN 032
113 SNOWCREST TRAIL
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3301 LASSITER ST. A
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GREENVILLE 27858 919 758-2524

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GREENSBORO 27410 919 294-6190

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1221 BUCKINGHAM AVE.
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3608 COURTLAND DR. A
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2772 LONDON LANE A
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625 WINDSONG LN. A
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59 POLKS LANDING
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36 MARY LOU ST.
METHUEN, MA 01844 919 748-2011

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210 WESTBROOK DR.
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792 ROSLYN RD. A
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14 SWALLOWS RIDGE CT.
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245 OAKWOOD COURT
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4528 AMERICAN DR.
DURHAM 27705 919 383-2029

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2116 SNOWCREST TRAIL
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5905 TAHOE DR.
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TOPE, WHITNEY DAVISON 032
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329 LINDSAY DR. #I-7 A S
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DURHAM 27707

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100-8 DICKENS COURT S
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B-3 THE VILLAGES A S
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ZARZAR, DAVID PAUL 032
S-4 THE VILLAGES APTS. A S
CARRBORO 27510 919 942-0294

Alphabetical List of Members
Fifty Year Club

The House of Delegates of the North Carolina Medical Society in May of 1953, authorized the Executive Council of The Society to establish a special recognition for those physicians residing in the State of North Carolina who were members currently of the State Medical Society, who had established legal practice of medicine and who had actively practiced medicine during their life time for a period of fifty years.

Listed below in alphabetical order are the names and addresses of those physicians who resided in North Carolina and whom the North Carolina Medical Society has recognized as members of the FIFTY YEAR CLUB of the State Medical Society. This list will be added to from year to year and likewise subtracted from as losses to this club group are sustained and reckoned.

The listing for 1990 only may include Fifty Year Club members who have passed away since their recognition. The list for other years will include only those members surviving.

1969—Marsh, Frank Baker, M.D., Salisbury

1971—Caviness, Verne Strudwick, M.D., Raleigh
Geddie, Kenneth Baxter, M.D., High Point

1974—Bowles, Francis Norman, M.D., Durham
Monroe, Clement R., M.D., Pinehurst

1975—Ader, Ottis Ladeau, M.D., Durham
Dale, Grover Cleveland, M.D., Goldsboro
Hart, Oliver James, Sr., M.D., Winston-Salem
Little, Lonnie Marcus, M.D., Statesville

1976—Combs, Joseph John, M.D., Raleigh
Davis, Phillip Bibb, M.D., High Point
Nowlin, George Preston, M.D., Charlotte
Royal, Donnie Martin, M.D., Salemburg
Tuggle, Allan Davis, M.D., Charlotte

1977—Easom, Herman Franklin, M.D., Wilson
Felton, Robert Lee, Jr., M.D., Carthage
Kempner, Walter, M.D., Durham
MacRae, John Donald, M.D., Dunedin, FL
Moss, George Oren, M.D., Forest City

1978—Houser, Forest Melville, M.D., Cherryville
Hunter, John Baldwin, M.D., Shelby
Newland, Charles Logan, M.D., Brevard
Ogburn, Lundie Calvin, M.D., Winston-Salem

1979—Baldwin, Marie, M.D., Asheville
Kneedler, William Harding, M.D., Concord
McDowell, Roy Hendrix, M.D., Belmont
Morris, Rae Henderson, M.D., Concord

1980—Beavers, James Wallace, M.D., Greensboro
Bonner, Merle Dumont, M.D., Greensboro
Cook, William Eugene, M.D., Fayetteville
Crumpler, James Fulton, M.D., Rocky Mount
Duffy, Charles, M.D., New Bern
Hare, Ransom Bryant, Jr., M.D., Black Mountain
LeBauer, Maurice Leon, M.D., Greensboro
Orgain, Edward Stewart, M.D., Durham
Owens, Zack Doxey, M.D., Camden
Roberson, Robert Stuart, M.D., Hazelwood
Robinson, Charles Wilson, M.D., Charlotte
Seay, Hillis Ledbetter, M.D., Huntersville
Wilson, Stephen Glenn, Sr., M.D., Angier

1981—Cranz, Oscar William, M.D., Kinston
Field, Bob Lewis, M.D., Salisbury
Fleming, Laurence Edwin, M.D., Charlotte
Green, Harold D., M.D., Punta Gorda, FL
Helsabeck, Belmont Augustus, M.D., Winston-Salem
Holmes, George Washington, M.D., Winston-Salem
McLeod, Vida Canaday, M.D., Southern Pines
Papineau, Alban, M.D., Plymouth
Paschal, George Washington, Jr., M.D., Raleigh
Prefontaine, J. Edouard, M.D., Greensboro
Redwine, James Daniel, M.D., Lexington
Register, John Francis, M.D., Greensboro
Ruark, Robert James, M.D., Raleigh
Sargent, Winston Arthur Y., M.D., Burnsville
Slate, Marvin Longworth, M.D., High Point
Walsh, C. Douglas, M.D., Salisbury
Williams, John Dudley, Jr., M.D., Greensboro
Young, David Alexander, M.D., Raleigh

1982—Arena, Jay Morris, M.D., Durham
Ayers, James Salisbury, M.D., Clinton
Blackerby, James, M.D., New Bern
Bradley, Harold John, Sr., M.D., Greensboro
Brinkhous, Kenneth Merle, M.D., Chapel Hill
Callaway, Jasper Lamar, M.D., Durham
Cox, Alexander McNeil, M.D., Madison
Fales, Robert Martin, M.D., Wilmington
Ferguson, George Burton, M.D., Durham
Fleming, William Leroy, M.D., Chapel Hill
Graham, Charles Pattison, M.D., Wilmington
Graham, William Alexander, M.D., Durham
Haar, Frederick Behrend, M.D., Greenville
Holbrook, J. Sam, M.D., Statesville
Lund, Herbert Zachareus, M.D., Greensboro
Lupton, Carroll Crescent, M.D., Greensboro
Mayer, Walter Brem, M.D., Charlotte
Printz, Don Ralph, M.D., Asheville
Robertson, James Mebane, M.D., Harmony
Sox, Carl Caughman, M.D., Kenly
Worley, James Harr, M.D., Asheville

1983—Baker, Lenox Dial, Sr., M.D., Durham
Barnhardt, Albert Earl, M.D., Kannapolis
Battle, Margaret E. White, M.D., Rocky Mount
Black, Paul Adrian L., M.D., Wilmington
Boyce, Oren Douglas, M.D., Gastonia
Brown, Walter John, M.D., Pittsboro
Cardwell, Willard, M.D., Greensboro
Conard-Corkey, Elizabeth M., M.D., Charlotte
Dalton, Bennie Booker, M.D., Wrightsville Beach
Dees, John Essary, M.D., Durham
Flythe, William Henry, M.D., High Point
Garrison, Ralph Bernard, M.D., Hamlet
Gay, Charles Houston, M.D., Charlotte

Glenn, Channing, M.D., Elizabethtown
Hedgpeth, William Carey, M.D., Lumberton
Hightower, Felda, M.D., Winston-Salem
Jones, O. Hunter, M.D., Charlotte
Jones, Thomas Thweatt, M.D., Durham
Kamp, Maurice Arthur, M.D., Charlotte
Lore, Ralph Eli, M.D., Lenoir
McKee, Lewis Middleton, M.D., Durham
Monroe, Lance Truman, M.D., Concord
Odom, Guy Leary, M.D., Durham
Olson, Robert Mortimer, M.D., Kenly
Pitts, William Reid, M.D., Charlotte
Raney, Richard Beverly, Sr., M.D., Chapel Hill
Roberts, Roy Foster, M.D., Asheville
Salle, George Frederic, M.D., Greenville
Schiebel, H. Max, M.D., Durham
Shinn, George Clyde, M.D., China Grove
Smith, O. Norris, M.D., Greensboro
Stead, Eugene Anson, Jr., M.D., Bullock
Verhoeff, Dirk, M.D., Hilton Head Island, SC
Wall, William Stanley, M.D., Rocky Mount
Whitaker, James Allen, M.D., Rocky Mount
Wilson, Frank Elmore, M.D., Lenoir City, TN
Wilson, William Lenoir, M.D., Pensacola, FL
Woodard, Barney Lelon, M.D., Kenly
Yurko, Anthony Andrew, M.D., Tryon

1984—Alexander, James Moses, M.D., Charlotte
Barefoot, William Frederick, M.D., Whiteville
Dees, Susan Coons, M.D., Durham
Hammond, Alfred Franklin, Jr., M.D., New Bern
Jamison, Edgar Lamont, M.D., Asheboro
Lohr, Dermot, M.D., Lexington
Oliver, Joseph Andrew, M.D., Rockwell
Quigless, Milton Douglas, Sr., M.D., Tarboro
Simmons, James Slater, M.D., Sanford
Taylor, Thomas Jefferson, M.D., Roanoke Rapids
Umphlet, Thomas Leonard, M.D., Raleigh
Warwick, Hight Claudius, M.D., Greensboro
Whitaker, Richard Harper, M.D., Kernersville

1985—Byerly, James Hampton, M.D., Sanford
Craig, Robert Lawrence, M.D., Asheville
Eyerman, Melvin Frederic, M.D., Winston-Salem
Fisher, Marshall Louis, M.D., New York, NY
Hamrick, John Carl, M.D., Shelby
Kendall, John Harold, M.D., Clinton
Knoefel, Arthur Eugene, Jr., M.D., Black Mountain
McKenzie, Wayland Nash, M.D., Albemarle
McLeod, Mary Margaret, M.D., Sanford
Pope, Samuel A., M.D., Beulaville
Powell, E. Charles, M.D., Goldsboro
Reynolds, Ernest Harold, M.D., Reidsville
Roberts, Louis Carroll, M.D., Durham
Rollins, Charles Dick, M.D., Henderson
Stephenson, Bennett Edward, M.D., Rich Square
Stewart, John Reagan, M.D., Statesville
Williams, Robert, M.D., Raleigh

1986—Bethel, Millard Baimbridge, M.D., Chapel Hill
Bundy, William Lumsden, M.D., North Wilkesboro
Caldwell, Robert Manfred, M.D., Dobson
Etherington, John Lawrence, M.D., Goldsboro
Gunter, June U., M.D., Durham
Harmon, Raymond Harris, M.D., Boone
Hinman, Havilah Edward, M.D., Skyland
Jones, Craig S., M.D., Naples, FL
Massengill, G. K., M.D., Raleigh
Morehead, Robert Page, M.D., Winston-Salem
Newell, Robert Bartholomew, M.D., Morehead City
Sealy, Will Camp, M.D., Macon, GA
Troutman, Baxter Suttles, M.D., Lenoir
Wadsworth, George Henry, M.D., Ahoskie
Walker, Elmer Pixley, M.D., Wilmington
Warshauer, Samuel Edward, M.D., Wilmington
Welton, David Goe, M.D., Charlotte
Worth, Thomas Clarkson, M.D., Raleigh
Wyman, John Sheldon, M.D., Hendersonville

1987—Anderson, Elbert Carl, M.D., Wilmington
Barringer, Archibald L., M.D., Mt. Pleasant
Burroughs, Ruth Reuben, M.D., Raleigh
Cannon, Eugene Bolivia, M.D., Asheboro
Corcoran, Edwin Emmons, M.D., Asheville
Cromartie, William James, M.D., Chapel Hill
Durr, Walter Jacob, M.D., Sylva
Edmondson, Frank, Jr., M.D., Asheboro
Elliott, Hardie Bishop, M.D., Southern Pines
Feezor, Charles Noel, M.D., Salisbury
Floyd, Anderson Gayle, M.D., Whiteville
Fresca, Victor Attilio, M.D., Morehead City
Gray, Cyrus Leighton, M.D., High Point
Grim, Kenneth Boyd, M.D., Long Beach
Howell, Charles Maitland, Jr., M.D., Winston-Salem
Matthews, William Camp, M.D., Chester, SC
Norfleet, Charles Millner, Jr., M.D., Winston-Salem
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Street, Murdo Eugene, Jr., M.D., Glendon
Vaughan, Edwin Warner, M.D., Greensboro
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Wilson, Jack Kennedy, Sr., M.D., Wilmington

1988—Adair, William Edward, Jr., M.D., Erwin
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Brown, Frank Reid, M.D., Greensboro
Bugg, Everett Irving, Jr., M.D., Pittsboro
Chamblee, John Sigma, M.D., Nashville
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McRae, Marvin Everett, M.D., Greensboro
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Shirey, John Luther, M.D., Asheville
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Thompson, George R. C., M.D., Hampstead
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Woody, John W. Austin, M.D., Tryon

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Bream, Charles Anthony, Chapel Hill
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Croom, Arthur Bascom, High Point
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Dorenbusch, Alfred Aldolph, Charlotte
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(See Page 26 for Key to Specialties)

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919 758-1862

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919 584-4006

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MCGILL U
800 334-5161

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919 228-1371

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BURLINGTON 27215
BOWMAN GRAY
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831 WARWICK COURT
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919 229-1570

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686 STILL RUN LN.
GRAHAM 27253
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919 226-0198

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919 222-1634

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TULANE U
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CHAPEL HILL 27514
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4045 FOREST OAKS LN.
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GRAHAM 27253
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919 226-2448

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4002 WHITE TAIL CT.
HIGH POINT 27260
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919 226-5191

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317 ENGLEMAN
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U OF PENN
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603 ISLEY PLACE, APT. D 42 44 49
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7763 LINDLEY MILL RD 51 52 52
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ROSS, DONALD MACCONNELL GS L/RT
3768 LUTHER CT. 41 50 50
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BURLINGTON 27215 919 227-3621
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BURLINGTON 27217 919 227-3621
TUFTS U

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SPREHE, SAMUEL EDWARD OTO AC
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U OF ILLINOIS

PSYCHIATRY

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AU, VICTOR K. PS AC 79 80 86
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TULANE U

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DUKE

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817 COLONIAL DRIVE
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440 CEDARWOOD DRIVE
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BOWMAN GRAY

HARMAN, JOHN SIMON U AC 61 68 68
1610 VAUGHN ROAD
BURLINGTON 27215 919 227-2761
MED COLL OF VA

WOLFF, MICHAEL R. U AC 83 83 88
1610 VAUGHN RD.
BURLINGTON 27215 919 227-2761
INDIANA U

2. ALEXANDER COMPONENT SOCIETY

OFFICERS—**President:** Russell W. Faulkenberry, M.D., 505 Third Ave., S.W., Taylorsville 28681 (704 632-9736)
Secretary: Steven C. Merrill, M.D., 107 2nd Ave., S.W., Taylorsville, 28681 (704 632-7076)

FAMILY PRACTICE

LONG, WALTER NATHANIEL, JR. FP AC 58 58 63
505 THIRD AVENUE, SW
TAYLORSVILLE 28681 704 632-9736
U OF NC

GENERAL PRACTICE

FRANCIS, RICHARD PAUL GP /GS AC 74 75 89
325 THIRD ST., SW
TAYLORSVILLE 28681 704 632-4183
U OF CONNECTICUT

GENERAL SURGERY

CHOONG, HAN PYO GS AC 61 72 78
P. O. BOX 548
503 THIRD STREET, SW
TAYLORSVILLE 28681 704 632-7467
KOREA U

3. ALLEGHANY COMPONENT SOCIETY

OFFICERS—**President:** Jack R. Cahn, M.D., Route 1, Box 439, Sparta 28675
Secretary: Jack R. Cahn, M.D., Route 1 Box 439, Sparta 28675

FAMILY PRACTICE

ASHLEY, GALE JACKSON FP AC 56 56 58
DOCTOR'S OFFICE BUILDING
SPARTA 28675 919 372-4644
U OF NC

CAHN, JACK RICHARD FP AC 72 75 79
616 DOCTOR'S ST.
SPARTA 28675 919 372-5606
PENN STATE U

LYON-SMITH, MARY E. FP AC 77 78 81
616 DOCTOR'S STREET
SPARTA 28675 919 372-5606
BOWMAN GRAY

GENERAL SURGERY

HERAVI, CYRUS GS AC 62 62 72
302 HOSPITAL ROAD
SPARTA 28675 919 372-4343
U OF TEHRAN

4. ANSON COMPONENT SOCIETY

OFFICERS—**President:** Abdolhakim Niazi-sai, M.D., 208 Hall St., Wadesboro 28170 (919 694-5151)
Secretary: Floyd W. Deen, Jr., M.D., 508 Morven Rd., Wadesboro 28170 (919 694-5164)

DIAGNOSTIC RADIOLOGY

DAVIS, ROBERT LEE DR /NM AC 61 61 71
515 CAMDEN ROAD
WADESBORO 28170 704 694-3597
BOWMAN GRAY

FAMILY PRACTICE

BURNEY, FREDRIC ARLEN FP AC 62 62 64
402 MORVEN ROAD
WADESBORO 28170 704 694-2129
U OF NC

DAVIS, DANIEL WHITAKER FP AC 59 59 60
402 MORVEN ROAD
WADESBORO 28170 704 694-2129
U OF NC

4. ANSON COMPONENT SOCIETY (Continued)

HENRY, GARY WAYNE — FP AC: 87 88 90
520 W. MAIN ST.
MARSHVILLE 28103
704 624-3388
EAST CAROLINA U

SMETHIE, WILLIAM MASSIE, SR. — GS L/RT: 39 39 46
PO BOX 651
WADESBORO 28170
704 694-2657
MED COLL OF VA

PULMONARY DISEASES

†SMITH, DAVID TILLERSON — PUD: 22 31 31
GENERAL DELIVERY
DECEASED--1990
PAWLEYS ISLAND, S. C. 29585
JOHNS HOPKINS

GENERAL SURGERY

MCKINNON, WILLIAM JAMES — GS L/RT: 40 46 46
501 W. WADE ST.
WADESBORO 28170
U OF MARYLAND

INTERNAL MEDICINE

NIAZI-SAI, ABDOLHAKIM — IM /HEM AC: 66 74 78
208 HALL STREET
WADESBORO 28170
704 694-5159
U OF TEHRAN

5. ASHE COMPONENT SOCIETY

EMERGENCY MEDICINE

HAUPT, RONALD ANTHONY — EM /FP C: 62 63 84
ROUTE #2, BOX 294
LANSING 28643
919 384-3708
LOMA LINDA U

INTERNAL MEDICINE

KOVACICH, JOHN JOSEPH — IM AC: 76 77 80
303 HOSPITAL RD.
SPARTA 28675
919 372-2481
EMORY U

6. AVERY COMPONENT SOCIETY

OFFICERS—**President:** Robert Smith, M.D., PO Box 248, Banner Elk 28604 (704 898-4686)
Secretary: Jacques Pye, M.D., PO Box 368, Banner Elk 28604 (704 898-6259)

FAMILY PRACTICE

CHAPMAN, ROBERT AMASA — FP AC: 55 55 66
P. O. BOX 728
BANNER ELK 28604
704 898-4828
OHIO STATE U

DICKSON, ALBERT PICKETT,III — FP AC: 52 53 62
PO BOX 219
NEWLAND 28657
704 733-9276
MED COLL OF VA

FINK, EMMA SLOOP — FP L: 36 38 38
BOX 426
CROSSNORE 28616
704 733-4367
VANDERBILT U

SMITH, EUSTACE HENRY — FP L: 50 51 52
BOX 190
CROSSNORE 28616
704 733-9297
MED COLL OF VA

GENERAL PRACTICE

LINN, BERNARD SIMPSON — GP /GS RT: 52 53 89
RT. #1, BOX 172
BANNER ELK 28604
704 898-6201
NEW YORK U

GENERAL SURGERY

MESSICK, WILLIAM JOSEPH — GS /VS AC: 80 85 89
PO BOX 1568
MTN. SPECIALITY HEALTH CARE
BANNER ELK 28604
704 898-6201
U OF NC

RAMBO, V. BIRCH — GS H: 52 53 58
235 INMAN DR., ZAIRE
DECATUR, GA 30030
U OF PENN

TATE, WILLIAM CUMMINGS, II — GS AC: 72 72 77
P. O. BOX 68
BANNER ELK 28604
704 898-4221
U OF NC

WOELFEL, JAMES THOMAS — GS AC: 59 60 75
P. O. BOX 122
BANNER ELK 28604
704 898-4937
M C OF WISCONSIN

INTERNAL MEDICINE

KIMMEL, DAVID PAUL — IM AC: 81 87 90
PO BOX 1565
BANNER ELK 28604
704 898-5176
U OF VIRGINIA

MESSICK, CATHERINE H. — IM AC: 81 85 90
PO BOX 1568
BANNER ELK 28604
704 898-6201
U OF NC

SMITH, ROBERT CLEMENT — IM /EM AC: 53 59 59
BOX 248
BANNER ELK 28604
704 898-5588
U OF PITTSBURGH

ORTHOPEDIC SURGERY

RADIOLOGY

LITTLEJOHN, MARK HAYS — R /NM AC: 61 62 81
CANNON MEMORIAL HOSPITAL
BANNER ELK 28604
704 898-5823
NORTHWESTERN U

SIMMONS, CHARLES NUMA — R AC: 55 55 79
PO BOX 26
CROSSNORE 28616
704 733-3203
MED U OF SC

7. BEAUFORT-HYDE-MARTIN-WASHINGTON-TYRRELL COMPONENT SOCIETY

OFFICERS—**President:** Edward F. Hill, M.D., 501 W. 15th St., Washington 27889 (919 975-2667)
Secretary: Robert P. Hadley, M.D., PO Box 1328, Washington 27889 (919 946-9074)
Executive Secretary: Jessie Brooks, 1308 Highland Dr., Washington 27889 (919 946-8061)

GENERAL SURGERY

EDWARDS, CHARLES DANIEL — GS RT: 50 59 59
PO BOX 2145
WASHINGTON 27889
919 946-5370
U OF WISCONSIN

ANESTHESIOLOGY

RILEY, PATRICK MICHAEL — AN AC: 79 81 83
RT. #1, BOX 214
WASHINGTON 27889
919 946-5846
MICHIGAN ST U

CARDIOVASCULAR DISEASES

NICHOLSON, THOMAS WESTRAY — CD /IM AC: 70 70 77
615 E. 12TH STREET
WASHINGTON 27889
919 946-2101
U OF NC

DERMATOLOGY

ALLIGOOD, TOBY RAY — D /IM AC: 76 76 81
1110 HIGHLAND DRIVE
WASHINGTON 27889
919 946-4176
BOWMAN GRAY

DIAGNOSTIC RADIOLOGY

DESROCHERS, DAVID ALAN — DR AC: 76 77 84
630 E. 11TH ST.
WASHINGTON 27889
919 946-2137
CORNELL U

TAYLOR, MARSHALL CARNEY — DR AC: 70 70 79
630 E. 11TH ST.
WASHINGTON 27889
919 946-2137
U OF VIRGINIA

EMERGENCY MEDICINE

SHELDON, FRANK CHADWICK — EM /GS AC: 62 62 74
BEAUFORT COUNTY HOSPITAL
EAST 12TH STREET
WASHINGTON 27889
919 975-4201
GEO WASHINGTON U

7. BEAUFORT-HYDE-MARTIN-WASHINGTON-TYRRELL COMPONENT SOCIETY (Continued)

FAMILY PRACTICE

BOYETTE, CHARLES OTIS FP AC
61 61 65
P. O. BOX 310
BELHAVEN 27810 919 943-2651
U OF NC

CHUNG, WAN SOO FP AC
71 76 78
320 MCCASKEY ROAD
WILLIAMSTON 27892 919 792-1071
KOREA U

HILL, EDWARD FELDIN FP AC
73 74 85
501 W. 15TH ST.
WASHINGTON 27889 919 975-2667
WASHINGTON U

JONES, GREGORY LEE FP AC
77 79 85
108 FRONT ST.
BELHAVEN 27810 919 238-2407
U OF NC

LIVERMAN, HENRY JOSEPH FP AC
50 50 52
P. O. BOX 218, LAZY LANE
ENGELHARD 27824 919 925-3271
U OF LOUISVILLE

MOORE, PAUL MILTON, JR. FP AC
59 59 63
619 E. 12TH STREET
WASHINGTON 27889 919 946-1146
U OF NC

NG, VICTOR WANG TA FP AC
59 60 62
PO BOX 999
ROBERSONVILLE 27871 919 795-3018
BOWMAN GRAY

NICHOLSON, JAMES EVANS, III FP /GER AC
78 79 84
304 MCCASKEY ROAD
WILLIAMSTON 27892 919 792-8193
U OF NC

PAPINEAU, ALBAN FP L
31 33 34
PO BOX 686
PLYMOUTH 27962 919 793-4155
U OF PENN

PUGH, RAEFORD THEODORE FP AC
57 57 61
619 E. 12TH STREET
WASHINGTON 27889 919 946-6486
U OF NC

SPEROS, THOMAS LEE FP AC
76 76 79
501 WEST 15TH STREET
WASHINGTON 27889 919 975-2667
U OF NC

GENERAL PRACTICE

JEON, MYUNG KIL GP AC
70 70 76
MEDICAL ARTS CENTER
PLYMOUTH 27962 919 793-5073
SEOUL NATL U

RHODES, JAMES SLADE, JR. GP L/RT
41 41 46
407 N. SMITHWICK ST.
WILLIAMSTON 27892 919 792-2036
MED COLL OF VA

UM, KI-BONG GP AC
71 76 83
P. O. BOX 625
ROBERSONVILLE 27871 919 795-4192
KOREA U

WRIGHT, JAMES THURMAN GP L
43 43 47
804 LATHAM ST.
BELHAVEN 27810 919 943-2375
JEFFERSON

ZINICOLA, DANIEL F. GP AC
83 86 90
PO BOX 686
PLYMOUTH CLINIC
PLYMOUTH 27962 919 793-4155
ROSS UNIV

GENERAL SURGERY

AGEE, ROBERT NELSON GS AC
66 66 86
302 S. MCCASKEY RD.
WILLIAMSTON 27892 919 792-1055
OHIO STATE U

COLEMAN, JAMES BARR GS AC
73 73 79
PO BOX 696
WASHINGTON 27889 919 946-0181
U OF NC

COLEMAN, PHILIP DIVOLL GS /TS AC
68 68 83
625 E. 12TH ST.
WASHINGTON 27889 919 946-0181
U OF NC

STANTON, ALLIE MCLEOD GS L/RT
43 51 53
DRAWER 925
PLYMOUTH 27962 919 793-4125
U OF TENNESSEE

WATERS, ZACK JAMES, JR. GS AC
61 61 70
604 E. 12TH STREET
WASHINGTON 27889 919 946-9004
U OF MARYLAND

GYNECOLOGY

BISHOP, JOHN MASON, JR. GYN C
57 61 61
118 N. HAUGHTON ST.
WILLIAMSTON 27892 919 781-7450
MED COLL OF VA

INTERNAL MEDICINE

AUSTIN, FREDERICK DA COSTA,III IM /ID AC
67 67 86
615 E. 12TH STREET
WASHINGTON 27889 919 946-2101
U OF NC

BROOKS, CLYDE LONG, JR. IM AC
85 86 82
615 E. 12TH ST.
WASHINGTON 27889 919 946-2101
U OF NC

OAK, CHANG YOON IM AC
70 70 84
HIGHWAY 64 EAST
PO BOX 987
PLYMOUTH 27962 919 793-9051
YONSEI U

PARTRICK, CORNELIUS THEODORE IM /CD RT
54 54 61
615 E. 12TH STREET
WASHINGTON 27889 919 946-2101
U OF NC

RODMAN, CLARK IM L/RT
43 43 47
615 E. 12TH STREET
WASHINGTON 27889 919 946-2101
JEFFERSON

STEPHENSON, HENRY LOUIS, JR. IM /CD AC
55 55 62
615 E. 12TH STREET
WASHINGTON 27889 919 946-2101
U OF NC

OBSTETRICS AND GYNECOLOGY

BRANTLEY, JULIAN CHISOLM,III OBG AC
75 77 79
701 SHOREWOOD DRIVE
WASHINGTON 27889 919 946-6544
U OF NC

JONES, ALBERT MCCRAY OBG L/RT
51 51 60
ROUTE #5, BOX 14
WASHINGTON 27889 919 946-8951
U OF VIRGINIA

PEACOCK, BRENDA S. OBG AC
84 84 88
614 EAST 12TH ST.
WASHINGTON 27889 919 946-6545
MED U OF SC

SILVERTHORNE, RAY GUILFORD OBG L/RT
51 51 55
RT. #2, BOX 35
WASHINGTON 27889 919 946-5168
BOWMAN GRAY

TAYLOE, JOSHUA OBG AC
61 61 69
614 E. 12TH STREET
WASHINGTON 27889 919 946-6544
U OF NC

OPHTHALMOLOGY

BALTIMORE, CHAS. LITTLEBURG,JR OPH AC
69 69 77
211 N. MARKET STREET
WASHINGTON 27889 919 946-2171
U OF VIRGINIA

CEIPS, RICHARD NORMAN OPH AC
86 87 90
211 N. MARKET ST.
WASHINGTON 27889 919 946-2171
MED U OF SC

JOHNSON, DONALD CARL OPH AC
58 58 64
P. O. BOX 699
WASHINGTON 27889 919 946-3111
BOWMAN GRAY

LARKIN, ERNEST WADDILL, JR. OPH L/RT
45 45 51
410 RIVERSIDE DR.
WASHINGTON 27889 919 946-2171
MED COLL OF VA

ORTHOPEDIC SURGERY

MILLER, GEORGE JOHN, JR. ORS AC
67 69 79
1207 HIGHLAND DRIVE
WASHINGTON 27889 919 946-6513
U OF ROCHESTER

PSYCHIATRY

KOSTRUBALA, THADDEUS LEWIS P AC
58 58 90
1308 HIGHLAND DR.
WASHINGTON 27889 919 946-8061
U OF VIRGINIA

PEDIATRICS

AINSOWRTH, DEBORAH LOWRY PD AC
87 89 91
608 E. 12TH ST.
WASHINGTON 27889 919 946-4134
EASTERN VA

COOK, RUSSEL CLIFFORD PD AC
76 76 80
608 E. 12TH STREET
WASHINGTON 27889 919 946-4134
BOWMAN GRAY

DOVER, CARL THOMAS, JR. PD AC
77 77 87
312 S. MCCASKEY RD.
PO BOX 845
WILLIAMSTON 27892 919 792-8101
BOWMAN GRAY

TAYLOE, DAVID THOMAS PD AC
50 50 55
608 E. 12TH STREET
WASHINGTON 27889 919 946-4134
U OF PENN

PLASTIC SURGERY

WALLACE, KELLEY, JR. PS /GS AC
63 63 74
330 N. MARKET ST.
WASHINGTON 27889 919 946-2223
U OF NC

PATHOLOGY, ANATOMICAL AND CLINICAL

HADLEY, ROBERT PURCELL PTH AC
61 67 68
P. O. BOX 1328
WASHINGTON 27889 919 946-9074
U OF VIRGINIA

RADIOLOGY

SANDY, ROBERT EUGENE R AC
53 59 60
630 E. 11TH ST.
WASHINGTON 27889 919 946-2137
U OF PITTSBURGH

UROLOGICAL SURGERY

GALUSZKA, ALBIN ADOLPH U L/RT
42 42 71
604 E. 12TH STREET
WASHINGTON 27889 919 946-0136
TUFTS U

JENKINS, JOSEPH MCKENDRIE U AC
74 74 79
210 RIVERSIDE DR.
WASHINGTON 27889 919 946-9045
U OF NC

8. BERTIE-GATES-HERTFORD COMPONENT SOCIETY

OFFICERS—**President:** Charles G. Pierce, M.D., 201 S. Colony Ave., Ahoskie 27910 (919 332-5041)
Secretary: Karen E. Daniels, M.D., PO Box 39, Lewiston-Woodville 27849 (919 348-2545)

ANESTHESIOLOGY

CASWELL, CHRISTOPHER C. AN AC
PO BOX 1121 85 85 90
AHOSKIE 27910 919 332-8121
TEMPLE U

FAMILY PRACTICE

ALSTON, MICHAEL CURTIS FP AC
405 HOLLY HILL RD. 78 79 82
MURFREESBORO 27855 919 398-5167
U OF NC

DANIELS, KAREN ELAINE FP AC
PO BOX 628 85 86 90
WINDSOR 27983 919 794-3216
RUTGERS MED SCH

DARDEN, JAMES LEE, JR. FP AC
ACADEMY ST., MED. ARTS BLDG. 47 48 50
AHOSKIE 27910 919 332-3548
BOWMAN GRAY

FLOOD, ROY DEVONNE FP AC
BOX #7, SPRING BRANCH ROAD 65 66 73
MURFREESBORO 27855 919 398-3323
HOWARD U

JENKINS, STANLEIGH EDWARD, JR. FP AC
501 HAYES STREET 66 66 70
AHOSKIE 27910 919 357-1226
U OF NC

JONES, COLIN DOUGLAS FP AC
ACADEMY STREET 73 73 75
AHOSKIE 27910 919 332-6138
U OF NC

LANG, DELANO ROOSEVELT, JR. FP AC
ROANOKE CHOWAN HOSPITAL 57 57 74
AHOSKIE 27910 919 332-3560
HOWARD U

SAUNDERS, JAY FRED FP AC
BOX 309 54 54 64
AULANDER 27805 919 345-3791
U OF NC

SAWYER, CHARLES JUDSON, III FP AC
MEDICAL ARTS CTR., ACADEMY ST. 63 63 67
AHOSKIE 27910 919 332-3548
U OF NC

TAYLOR, JULIAN RALEIGH FP AC
MEDICAL ARTS CENTER 69 69 74
AHOSKIE 27910 919 332-3548
BOWMAN GRAY

WEAVER, JOSEPH DUDLEY FP L
111 N. MAPLE STREET 38 38 66
AHOSKIE 27910 919 332-2196
HOWARD U

GENERAL PRACTICE

MCLEAN, AUGUSTUS ALEXANDER, JR GP L/RT
P. O. BOX 98 45 45 48
MURFREESBORO 27855 919 398-3789
MED COLL OF VA

GENERAL SURGERY

DAVIS, ROBERT ALDEN GS AC
BERTIE MEMORIAL HOSPITAL 81 86 79
WINDSOR 27983 919 794-4865
BOWMAN GRAY

KAHN, ROBERT CHARLES GS AC
RT. #2, BOX 16-E 77 79 82
AHOSKIE 27910 919 332-2244
U OF PENN

QURESHI, AFTAB AHMAD GS /OBG AC
226 S. ACADEMY ST. 62 62 81
AHOSKIE 27910 919 332-2244
KING EDWARD COLL

WADSWORTH, GEORGE HENRY GS L/RT
P. O. BOX 27 36 36 48
AHOSKIE 27910 919 332-2215
U OF CINCINNATI

INTERNAL MEDICINE

CLAYTON, MELVIN LOUIS IM /FP AC
PO BOX 788 73 73 76
AHOSKIE 27910 919 332-2993
U OF NC

EAGLES, ARCHIE YELVERTON IM L/RT
RT. #2, BOX 25 39 46 47
AHOSKIE 27910 919 332-5596
DUKE

FREI, TIMOTHY EDWARD IM AC
AHOSKIE MEDICAL ASSOC., INC. 79 80 83
PO BOX 340
AHOSKIE 27910 919 332-4155
JEFFERSON

OBSTETRICS AND GYNECOLOGY

LEWIS, HENRY, III OBG AC
403 S. CURTIS ST. 81 81 89
AHOSKIE 27910 919 332-2260
HOWARD U

LIEBERT, KAREN FUREY OBG AC
400 S. CURTIS ST. 81 82 89
AHOSKIE 27910 919 332-6161
GEORGETOWN U

ORTHOPEDIC SURGERY

CABINUM, DOMINGO E., JR. ORS AC
PO BOX 457 61 71 89
AHOSKIE 27910 919 332-8344
U OF PHILIPPINES

OTOLARYNGOLOGY

GELOT, RAGHUVIR BAXIRAM OTO AC
RT. #1, BOX 6-B 67 71 78
AHOSKIE 27910 919 332-5917
BARODA U

PEDIATRICS

PIERCE, CHARLES GRAINGER PD /PDA AC
201 S. COLONY AVENUE 75 77 73
AHOSKIE 27910 919 332-5041
U OF NC

QURESHI, FAIQA AFTAB PD AC
222 S. ACADEMY ST. 73 78 83
AHOSKIE 27910 919 332-3403
KING EDWARD COLL

RADIOLOGY

DAUGHTRIDGE, TRUMAN GIFFIN R AC
706 WOODLAWN DRIVE 55 56 81
AHOSKIE 27910 919 332-8121
TEMPLE U

FRANK, JOE LEE, JR. R L
PO BOX 1387 43 55 55
AHOSKIE 27910 919 332-2390
COLUMBIA U

YENNEY, MATTHEW F.J., JR. R /NM AC
3621 WINSTEAD RD. 54 54 61
ROCKY MOUNT 27804 919 332-1156
JEFFERSON

UROLOGICAL SURGERY

ALMARIO, JOSELITO U AC
500 N. ACADEMY ST. 67 67 82
AHOSKIE 27910 919 332-6444
U OF SANTO TOMAS

9. BLADEN COMPONENT SOCIETY

OFFICERS—**President:** Otha A. Barnhill, M.D., Doctor's Drive, Box 488, Elizabethtown 28337 (919 862-3150)
Secretary: Robert L. Summerlin, M.D., Box 10, Dublin Clinic, Dublin 28332 (919 862-3528)

EMERGENCY MEDICINE

ALEXANDER, RICHARD LYNN EM AC
BLADEN COUNTY HOSPITAL 85 86 89
EMERGENCY DEPT.
ELIZABETHTOWN 28337 919 862-5133
WEST VA U

FAMILY PRACTICE

BRADLEY, BETTY BRUTON FP AC
P. O. BOX 998 79 80 85
BLADENBORO 28320 919 863-3138
DUKE

BRIDGERS, STEPHEN B. FP AC
PO BOX 2231 85 86 89
ELIZABETHTOWN 28337 919 862-8885
EAST CAROLINA U

ENOJADO, SILVERIO CASTRO,JR. FP AC
P. O. BOX 308 61 61 77
CLARKTON 28433 919 647-4311
U OF SANTO TOMAS

SUMMERLIN, ROBERT LEE FP AC
DUBLIN MEDICAL CLINIC 55 55 58
PO BOX 10
DUBLIN 28332 919 862-3528
U OF NC

GENERAL PRACTICE

GLENN, CHANNING GP L/RT
P. O. BOX 278 33 33 39
ELIZABETHTOWN 28337 919 862-3721
MED COLL OF VA

GENERAL SURGERY

LOPES, C. DEJESUS GS /GP AC
P. O. BOX 1358 61 61 74
ELIZABETHTOWN 28337 919 862-3112
U OF PARANA

9. BLADEN COMPONENT SOCIETY (Continued)

TERNAL MEDICINE

PHILLIPS, BRUCE ALTON, JR. — IM /GE AC 67 67 74
P. O. BOX 86
ELIZABETHTOWN 28337 — 919 862-3212
U OF NC

RADIOLOGY

SHIEH, RICHARD CHEN HAI — R AC 54 71 81
204 HARWOOD ST.
ELIZABETHTOWN 28337 — 919 862-4043
NATL DEF-TAIPEI

10. BRUNSWICK COMPONENT SOCIETY

OFFICERS—**President:** Mustag H. Kahn, M.D., Route 3, Box 23, Supply 28462 (919 754-8115)
Secretary: Ed Lance, M.D., PO Box 4130, Calabash 28470 (919 579-8512)

DIAGNOSTIC RADIOLOGY

EASON, GEORGE WILLIAM — DR C 74 75 80
711 FOREST HILLS DR.
WILMINGTON 28403 — 919 399-8112
U OF ALABAMA

EMERGENCY MEDICINE

HILZ, MARK DAVID — EM AC 81 84 85
111 MULLETT
HOLDEN BEACH 28462 — 919 754-8121
U OF CINCINNATI

FAMILY PRACTICE

ALMIRALL, PETER DAVID — FP /OM AC 78 79 83
OAK ISLAND MEDICAL CENTER
307 YAUPON DR.
YAUPON BEACH 28465 — 919 278-3316
U OF TORONTO

FORSTNER, JAMES ROBERT — FP AC 73 74 77
250 E. 11TH ST.
SOUTHPORT 28461 — 919 457-9564
U OF NC

NUNEZ, GREGORY M. — FP C 87 88 90
341 WHITEVILLE RD.
SHALLOTTE 28459 — 919 754-8731
U OF CALIFORNIA

SAVARESE, CHARLES JOSEPH, JR. — FP /CD 50 51 78
P. O. BOX 1948
SHALLOTTE 28459 — 919 754-8105
GEO WASHINGTON U

WALLIN, GENE AMBROSE — FP AC 65 65 73
1004 N. HOWE ST.
SOUTHPORT 28465 — 919 457-6214
U OF TENNESSEE

GENERAL PRACTICE

LANGSTON, BERNARD LEROY, III — GP AC 72 73 85
P. O. BOX 1934
SHALLOTTE 28459 — 919 754-8731
MED U OF SC

GENERAL SURGERY

KHAN, MUSHTAQ HUSSAIN — GS /GP AC 67 73 78
ROUTE #3, BOX 23
SUPPLY 28462 — 919 754-8115
KAKATIYA MED COL

LOCKE, CHARLES JOHN — GS C 72 73 90
PO BOX 6069
SHALLOTTE 28459 — 919 754-9465
JEFFERSON

ZUKOSKI, ROBERT MICHAEL — GS /GYN AC 77 82 85
904 HOWE ST., NORTH
SOUTHPORT 28461 — 919 457-5292
JEFFERSON

INTERNAL MEDICINE

SAVIDGE, THOMAS OLIVER — IM /CD AC 60 60 79
906 N. ATLANTIC AVE.
SOUTHPORT 28461
HAHNEMANN

OBSTETRICS AND GYNECOLOGY

HASSLER, ROBERT EMIEL — OBG AC 60 61 85
#16 MEDICAL CENTER DR.
SUPPLY 28462 — 919 754-9166
NEW YORK MED COL

ORTHOPEDIC SURGERY

AZZATO, JOHN ANTHONY — ORS AC 70 71 77
902 HOWE ST.
SOUTHPORT 28461 — 919 457-4789
JEFFERSON

CANDELA, STEPHEN JOSEPH — ORS AC 77 79 85
PO BOX 260
SUPPLY 28462 — 919 754-4355
AUTONOMA UNIV

PEDIATRICS

MULHOLLAND, JAMES VINCENT — PD /PD AC 57 58 79
PO BOX 1208
SHALLOTTE 28459 — 919 754-8117
DOWNSTATE ME CTR

RADIOLOGY

GRIMMETT, MATTHEW HILL — R /PD L/RT 43 49 50
829 SHORELINE DRIVE, WEST
SUNSET BEACH 28459 — 919 579-2091
DUKE

11. BUNCOMBE COMPONENT SOCIETY

OFFICERS—**President:** Philip C. Davis, M.D., 93 Victoria Rd., Asheville 28801 (704 253-4821)
Secretary: David A. Brown, M.D., 390 S. French Broad Ave., Asheville 28801 (704 254-5366)
Executive Director: Michael W. McManus, Buncombe Component Medical Society, 100 Victoria Rd., Asheville 28801 (704 251-9751)
Executive Secretary: Evelyn Carter, Buncombe Component Medical Society, 100 Victoria Rd., Asheville 28801 (704 251-9751)

NO SPECIALTY LISTED

BENNETT, JOHN MARK — AC 87 88 90
491 BILTMORE AVE.
ASHEVILLE 28801
UNIV. OF NC

HARNED, ROBERT G. — AC 86 86 84
603 BILTMORE AVE.
ASHEVILLE 28801 — 919 924-2340
BOWMAN GRAY

JEFFRIES, LYDIA M. — AC 86 87 88
150 CHEROKEE RD.
ASHEVILLE 28801 — 919 684-8111
U OF IOWA

MAXWELL, KEITH MELVIN — AC 82 83 88
445 BILTMORE AVE., STE. 401
ASHEVILLE 28801 — 704 251-1357
ORAL ROBERTS U

TRASK, ELIZABETH JETER — AC 82 00 80
445 BILTMORE CTR., ST. 105
ASHEVILLE 28801
EAST CAROLINA U

ALLERGY

ATWATER, JOHN SPENCER, JR. — A /PD AC 70 71 77
390 S. FRENCH BROAD AVE.
ASHEVILLE 28801 — 704 254-5366
MED COLL OF GA

FRAZIER, CLAUDE ALBEE — A L 44 50 50
DOCTOR'S PARK
ASHEVILLE 28801 — 704 254-1650
MED COLL OF VA

HYDE, AUSTIN TABER, JR. — A /IM AC 51 54 57
BOX 189
JONAS RIDGE 28641 — 704 286-9036
U OF VIRGINIA

SHIREY, JOHN LUTHER — A L/RT 39 39 50
NEW LEICESTER HIGHWAY
RT. #4, BOX 1525
ASHEVILLE 28806 — 704 683-2360
JEFFERSON

ALLERGY & IMMUNOLOGY

BROWN, DAVID ALLEN — AI AC 82 86 88
390 S. FRENCH BROAD AVE.
ASHEVILLE 28801 — 704 254-5366
MED COLL OF GA

ELLISTON, WINSTON LEON — AI /PD AC 73 73 79
210 ASHELAND AVE.
ASHEVILLE 28801 — 704 253-3382
LOMA LINDA U

ANESTHESIOLOGY

BELL, CAROL ROLAND — AN AC 60 60 70
202 DOCTOR'S BUILDING
ASHEVILLE 28801 — 704 254-1969
MED U OF SC

ELLINGTON, KENNETH RAYNOR — AN AC 86 90 90
202 DOCTORS BLDG.
ASHEVILLE 28801 — 704 254-1969
U OF NC

11. BUNCOMBE COMPONENT SOCIETY (Continued)

GETTINGER, GLEN SCOTT AN /IM AC
211 RIVA RIDGE DR. 81 83 86
FAIRVIEW 28730 704 254-1969
EMORY U

GRAVATT, BENJAMIN THOMAS AN AC
202 DOCTOR'S BUILDING 79 80 83
ASHEVILLE 28801 704 254-1969
U OF PITTSBURGH

GUNTHER, ROBERT CLARENCE AN AC
25 LAWRENCE PLACE 64 64 73
ASHEVILLE 28801 704 252-1016
NEW YORK U

HART, ANDREW PAUL AN AC
202 DOCTORS BLDG. 84 87 90
ASHEVILLE 28801 704 254-1969
U OF IOWA

HOOKER, MICHAEL PHILLIP AN AC
202 DOCTORS BLDG. 80 80 85
ASHEVILLE 28801 704 254-1969
U OF OREGON

HOSKINS, JOHN ROBINSON, III AN L/RT
7 AMHERST RD. 44 50 50
ASHEVILLE 28803 704 274-5049
JEFFERSON

MEYER, JOHN A. AN AC
202 DOCTORS BLDG. 83 81 88
ASHEVILLE 28801 704 254-1969
U OF FLORIDA

MORETZ, FRANK HANNON AN AC
202 DOCTOR'S BUILDING 74 76 81
ASHEVILLE 28801 704 254-1969
U OF NC

OXNER, CLAUDIA GERTRUDE AN AC
DOCTOR'S BLDG.,RM. #202 56 60 60
ASHEVILLE 28801 704 254-1960
MED U OF SC

POWELL, BENJAMIN PHILIP AN AC
421 VANDERBILT ROAD 71 72 79
ASHEVILLE 28803 704 252-1016
U OF ALABAMA

ROOS, STEVEN DAVID AN AC
7 PARK VIEW DR. EXT. 84 85 87
ASHEVILLE 28805 704 298-9639
U OF COLORADO

STONE, BRADLEY ALLEN AN AC
445 BILTMORE AVE., STE. 105 82 85 90
ASHEVILLE 28801 704 252-1016
MED COLL OF OHIO

TRAMM, JEANNE NORGAARD AN AC
MEMORIAL MISSION HOSP. 81 82 85
ASHEVILLE 28801 704 254-1969
NORTHWESTERN U

CARDIOVASCULAR DISEASES

LAWRENCE, JOHN ELMORE, JR. CD /IM AC
P.O. BOX 7239 72 74 82
ASHEVILLE 28802 704 254-8054
DUKE

RUSSELL, JOHN HUNTER CD AC
BOX 7239 63 63 71
ASHEVILLE 28802 704 254-8054
U OF VIRGINIA

SALISBURY, KENT WILLIAM CD /IM AC
PO BOX 7239 68 68 77
ASHEVILLE 28802 704 254-8054
HARVARD

SAUNDERS, WADE HAMPTON,III CD AC
PO BOX 7239 67 68 73
ASHEVILLE 28802 704 254-8054
DUKE

SERFAS, DAVID HILL CD AC
PO BOX 7239 77 77 86
ASHEVILLE 28802 704 254-8054
CORNELL U

VAN TASSEL, ERIC D. CD /IM AC
PO BOX 7239 82 83 79
ASHEVILLE 28802 704 254-8054
U OF NC

VASEY, CHARLES GIBBS CD AC
PO BOX 7239 80 80 90
ASHEVILLE 28802 704 254-8054
U OF IOWA

CARDIOVASCULAR SURGERY

BILBREY, GEORGE MARVIN, JR CDS /TS AC
257 MCDOWELL STREET 62 62 72
ASHEVILLE 28803 704 258-1121
U OF ALABAMA

BURTON, HARRY G., III CDS /TS AC
257 MCDOWELL ST. 74 76 85
ASHEVILLE 28803 704 258-1121
U OF LOUISVILLE

CLAXTON, CALVIN PORTER, JR. CDS /TS AC
257 MCDOWELL STREET 61 61 74
ASHEVILLE 28803 704 258-1121
U OF VIRGINIA

KELLER, CHARLES AUGUSTUS, JR. CDS AC
257 MCDOWELL STREET 59 67 67
ASHEVILLE 28803 704 258-1121
LA STATE U

KENNERLY, ROBERT M. CDS /TS AC
445 BILTMORE CTR., STE. 103 72 76 89
ASHEVILLE 28801 704 258-9446
GEORGETOWN U

MAUNEY, FRANK MAXTON, JR. CDS /TS AC
257 MCDOWELL STREET 59 59 68
ASHEVILLE 28803 704 258-1121
DUKE

CHILD NEUROLOGY

HUFFSTUTTER, WILLIAM MAURICE CHN /N AC
6 BROOKLET ST. 77 78 84
ASHEVILLE 28801 704 252-8983
U OF TENNESSEE

CHILD PSYCHIATRY

WALKER, EDWIN OWSLEY CHP AC
PO BOX 5534 79 81 90
ASHEVILLE 28813 704 253-3681
U OF LOUISVILLE

COLON AND RECTAL SURGERY

LAURENS, JOHN CRS AC
445 BILTMORE CENTER, STE. 303 44 44 75
ASHEVILLE 28801 704 258-8181
TULANE U

DERMATOLOGY

ARIAIL, JERRY NOLAN D AC
390 S. FRENCH BROAD AVE. 71 72 77
ASHEVILLE 28801 704 252-3576
MED COLL OF GA

COOK, JAMES HOSMER D AC
281 MCDOWELL STREET 63 64 73
ASHEVILLE 28803 704 252-5679
U OF IOWA

CUMMINGS, CHARLES EMMETT D AC
281 MCDOWELL STREET 58 62 63
ASHEVILLE 28803 704 252-5676
LA STATE U

GODBOLD, RONALD LEE D AC
281 MCDOWELL STREET 69 69 74
ASHEVILLE 28803 704 252-5679
U OF ALABAMA

HUTTO, EDITH D RT
E-11 WOODFIELD 58 59 63
ASHEVILLE 28803 704 298-2954
MED U OF SC

PRINTZ, DON RALPH D L/RT
10 DEERFIELD ROAD 32 32 47
ASHEVILLE 28803 704 274-1234
OHIO STATE U

DIABETES

RUSSELL, JEFFREY KENT DIA /END AC
445 BILTMORE CENTER, STE. 302 72 72 77
ASHEVILLE 28801 704 253-6812
U OF VIRGINIA

DIAGNOSTIC RADIOLOGY

ARENDALE, STEPHEN SYDNES DR /NM AC
STE. 301, 445 BILTMORE CENTER 67 67 77
ASHEVILLE 28801 704 254-2371
BAYLOR

BRAUN, SIMON DAVID DR AC
4 HOLMWOOD RD. 77 78 83
PO BOX 2959
ASHEVILLE 28801 704 254-4617
EMORY U

GALLAGHER, TIMOTHY JOSEPH DR AC
P. O. BOX 2959 69 69 77
103 DOCTOR'S BUILDING
ASHEVILLE 28802 704 255-4167
LA STATE U

HARTMANN, THOMAS MICHAEL DR AC
PO BOX 2959 80 81 85
ASHEVILLE 28802 704 254-4617
EMORY U

JAGODA, FRANK SAMUEL DR AC
PO BOX 2959 85 86 89
ASHEVILLE 28802 704 254-4617
U OF TEXAS

KIEFFER, HENRI L.G. DR AC
103 DOCTORS BLDG. 80 81 87
PO BOX 2959
ASHEVILLE 28802 704 254-4617
U OF VIRGINIA

MILTON, DAVID THOMAS DR AC
445 BILTMORE, STE. 301 81 81 86
ASHEVILLE 28801 704 255-5161
U OF TENNESSEE

ROWE, CHARLES THOMAS DR AC
DOCTORS BLDG., STE. 103 68 68 79
ASHEVILLE 28801 704 254-4617
U OF VIRGINIA

SHIVERS, JAMES ALLISON DR /NM AC
STE. 301, 445 BILTMORE CENTER 71 71 77
ASHEVILLE 28801 704 254-2371
U OF NC

STEINFELD, JOHN ROBERT DR AC
P. O. BOX 2959 68 68 75
ASHEVILLE 28802 704 254-4617
U OF VIRGINIA

WEAST, ROBERT RANDOLPH DR AC
STE. 301, 445 BILTMORE CENTER 70 72 77
ASHEVILLE 28801 704 254-2371
U OF PENN

EMERGENCY MEDICINE

BALDWIN, BOYCE D., JR. EM C
225 LAMBETH WALK 87 89 89
FLETCHER 28732 704 255-4032
EAST CAROLINA U

BERNER, THOMAS EM AC
22 WILLOW RD. 68 68 75
ASHEVILLE 28804 704 274-3592
JOHNS HOPKINS

BURT, TERRENCE WILLIAM EM AC
405 WINDSWEPT DR. #703 79 80 85
ASHEVILLE 28801 704 255-3786
LA STATE U

FRAZER, JOE WALTON, III EM AC
114 GIBSON RD. 79 81 90
ASHEVILLE 28804 704 255-4070
DUKE

HANSCOM, ALFRED CARLETON EM /FP AC
RT. #11, BOX 260 53 54 81
HENDERSONVILLE 28792 704 693-7623
LOMA LINDA U

HENDERSON, REX ARTHUR EM AC
36 WEMBLEY ROAD 78 79 85
ASHEVILLE 28804 704 255-3786
U OF MIAMI

11. BUNCOMBE COMPONENT SOCIETY (Continued)

ENDOCRINOLOGY

LESTER, DAVID ALAN — END /IM AC 73 78 81
445 BILTMORE CENTER, STE. 302
ASHEVILLE 28801 704 253-6812
U OF OKLAHOMA

TAUBER, STUART DAVIS — END AC 60 60 73
29 RAVENSCROFT DRIVE
ASHEVILLE 28801 704 258-2404
U OF PITTSBURGH

FAMILY PRACTICE

BATE, DAVID SOULE, JR. — FP AC 79 80 85
1812 HENDERSONVILLE RD.
ASHEVILLE 28803 704 684-0011
GEO WASHINGTON U

BAUMGARTEN, ALAN S. — FP AC 83 84 88
206 ASHELAND AVE.
ASHEVILLE 28801 704 258-8681
MICHIGAN ST U

BERKEY, WILLIAM SALDERUS, JR — FP AC 73 75 75
PO BOX 696
SKYLAND 28776 704 684-7801
LOMA LINDA U

ELLISTON, E. BRUCE — FP AC 72 72 74
206 ASHELAND AVE.
ASHEVILLE 28801 704 258-8681
LOMA LINDA U

FOY, DAVID MARK — FP AC 78 78 79
N-1 DOCTOR'S DR.
ASHEVILLE 28801 704 252-8885
CASE WESTERN RES

GRAINGER, WADE KENTON — FP /GER AC 83 84 86
2161 HENDERSONVILLE RD. APT. C
ARDEN 28704 704 684-2008
LOMA LINDA U

HAMILTON, WILLIAM GODFREY — FP AC 66 76 78
P. O. BOX 429
FAIRVIEW 28730 919 628-2225
U OF LONDON

HICKS, MELISSA M. — FP AC 84 85 88
491 BILTMORE AVE.
ASHEVILLE 28801 704 258-0635
U OF MISSOURI

HOLT, JOHN PLUMMER — FP AC 56 58 61
92 CONGRESS ST.
ASHEVILLE 28801 704 255-8494
MEHARRY MED COLL

HUBBARD, ROBERT THOMAS — FP L/RT 43 43 47
GIVENS ESTATES
100 WESLEY DR., UNIT 507
ASHEVILLE 28803 704 274-7651
TEMPLE U

JAMES, ROGER ALLEN — FP AC 59 66 67
946 TUNNEL ROAD
ASHEVILLE 28805 704 298-7981
BAYLOR

JENSEN, ROGER D. — FP AC 75 76 87
640 MERRIMON AVE.
ASHEVILLE 28804 704 258-0670
U OF NEBRASKA

JOHNSON, PAUL BERNERD — FP AC 83 84 90
206 ASHELAND AVE.
ASHEVILLE 28801 704 258-8681
U OF OREGON

JOHNSON, RONALD W. — FP AC 81 82 87
172 ASHELAND AVE.
ASHEVILLE 28801 704 252-1131
MED U OF SC

KELLY, JOHN JAY — FP AC 79 80 89
612 U. S. HIGHWAY 70
SWANNANOA 28778 704 686-5232
ALBANY MED COLL

KELLY, RICHARD BRUCE — FP AC 80 80 85
N-1 DOCTOR'S DR.
ASHEVILLE 28801 704 258-0670
MED COLL OF OHIO

KNOEFEL, ARTHUR EUGENE, JR. — FP L/RT 35 35 38
PO BOX 875
BLACK MOUNTAIN 28711 704 669-7125
LA STATE U

KODACK, ALBERT — FP /GYN L 40 40 46
6 STONEY RIDGE
ASHEVILLE 28804 704 252-5737
U OF TORONTO

LIGON, HAROLD BELTON — FP AC 55 56 56
MEDICAL CENTER BUILDING
86 VICTORIA ROAD
ASHEVILLE 28801 704 252-1585
MED U OF SC

MARTIN, J. PAUL — FP /ALD AC 76 77 85
491 BILTMORE AVE.
ASHEVILLE 28801 704 258-0670
U. OF ARIZONA

MCMILLAN, JAMES H. — FP AC 77 78 84
206 ASHELAND AVE.
ASHEVILLE 28801 704 258-8681
MED COLL OF GA

NAGEL, DONALD CHARLES — FP /ALD AC 72 72 76
ALCOHOL AND DRUG ABUSE
TREATMENT CTR., PO BOX 1441
BLACK MOUNTAIN 28711 704 669-3424
U OF NC

OLSON, PAUL RICHARD — FP AC 68 77 78
ROUTE #3, BOX 112
LEICESTER 28748 704 258-0635
U OF VERMONT

PYERITZ, ERIC ALLEN — FP AC 78 80 87
501 BILTMORE AVE.
ASHEVILLE 28801 704 258-0670
U OF PITTSBURGH

ROBERTSON, BRISON OAKLEY, III — FP AC 80 81 84
N-1 DOCTOR'S DR.
ASHEVILLE 28801 704 252-8885
U OF SOU ALA

ROGERS, DAVID YORK — FP /EM AC 77 80 84
115 1/2 MT. CARMETL RD.
ASHEVILLE 28806 704 253-3717
HAHNEMANN

SLOAN, JAMES MARSHALL, III — FP /IM AC 56 56 62
942 TUNNEL ROAD
ASHEVILLE 28805 704 298-7972
DUKE

SNODDY, WILLIAM RAY — FP AC 75 75 78
N-1 DOCTOR'S DR.
ASHEVILLE 28801 704 252-8885
U OF ALABAMA

SOMMERVILLE, LEWIS CASS — FP AC 54 55 55
1425 PATTON AVENUE
ASHEVILLE 28806 704 254-5385
LOMA LINDA U

SUMMERLIN, HARRY HOLLER, JR. — FP AC 61 61 66
491 BILTMORE AVE.
ASHEVILLE 28801 704 258-0670
DUKE

SWEEDE, SHARON SUE — FP AC 79 80 81
1 PARKVIEW DR.
ASHEVILLE 28805 704 669-3460
EMORY U

TAIT, JEFFREY — FP AC 73 73 90
201 CHARLOTTE ST.
ASHEVILLE 28801 704 254-5470
U-NEWCASTLE,ENG.

WALLER, LOUIS CLINTON — FP L/RT 44 46 47
7 SHADY LANE
CANDLER 28715 704 667-1412
LOMA LINDA U

WALTON, RICHARD FRANK — FP AC 61 63 77
491 BILTMORE AVE.
ASHEVILLE 28801 704 258-0635
QUEENS U

WANDER, JOHN C. — FP AC 79 80 87
PO BOX 610
FAIRVIEW 28730 704 628-2225
ST LOUIS U

GASTROENTEROLOGY

ALEXANDER, JAMES RAY — GE AC 80 80 89
49 MCDOWELL ST.
ASHEVILLE 28801 704 258-3870
U OF TENNESSEE

BOND, THOMAS MADISON — GE /IM AC 80 84 86
49 MCDOWELL ST.
ASHEVILLE 28801 704 258-3870
U OF NC

CLARK, KENNETH JAMES, JR. — GE /IM AC 71 72 78
49 MCDOWELL ST.
ASHEVILLE 28801 704 258-3870
ST U OF NY-BUFF

DEERING, TIMOTHY BRADFORD — GE /IM AC 72 74 78
30 CHOCTAW STREET
ASHEVILLE 28801 704 254-0881
NEW YORK MED COL

GRIER, MICHAEL WILLIAM — GE /IM AC 69 69 77
30 CHOCTAW STREET
ASHEVILLE 28801 704 254-0881
U OF SOU CALIF

MORGAN, JAMES SILL — GE /IM AC 82 85 89
30 CHOCTAW ST.
ASHEVILLE 28801 704 254-0881
CORNELL U

SHUFORD, FULLER ADAMS — GE /IM AC 62 62 66
49 MCDOWELL ST.
ASHEVILLE 28801 704 258-3870
U OF NC

SMITH, RICHARD LLOYD — GE AC 72 72 79
30 CHOCTAW STREET
ASHEVILLE 28801 704 254-0881
TULANE U

THOMPSON, FRANK ALAN — GE /IM AC 75 76 81
W-18 DOCTORS BLDG.
ASHEVILLE 28801 704 252-2904
U OF NC

GENERAL PRACTICE

CHIPLEY, PATRICK LINCOLN — GP AC 56 56 58
P. O. BOX 399
ENKA 28728 704 667-2531
BOWMAN GRAY

†PRATHER, FONZO GOFF — GP 23 23 47
5 FAIRWAY DRIVE
DECEASED--10-19-90
ASHEVILLE 28805 704 298 -4071
U OF MARYLAND

SMITH, EVERETT DUANE — GP AC 53 54 54
BOX 1030
CANDLER 28715 704 667-2526
LOMA LINDA U

SPRINKLE, LAWRENCE TILSON — GP L 45 45 48
BOX 218, 104 N. MAIN ST.
WEAVERVILLE 28787 704 645-3031
JEFFERSON

GENERAL PREVENTIVE MEDICINE

TENNEY, JAMES BERNARD — GPM /PH AC 60 65 77
32 HOYT ROAD
ARDEN 28704 704 255-5671
HAHNEMANN

GENERAL SURGERY

CAMBLOS, JOSHUA F. B. — GS /GYN L/RT 43 48 49
17 FOREST ROAD
ASHEVILLE 28803 704 274-2794
U OF VIRGINIA

COLLEY, JAMES OSCAR, III — GS AC 71 71 90
M-105 DOCTORS BLDG.
ASHEVILLE 28801 704 253-1529
U OF ALABAMA

DODD, PATRICIA — GS /GYN L/RT 44 54 55
325 VANDERBILT RD.
ASHEVILLE 28803 704 274-2795
U OF MARYLAND

EUBANKS, REAVIS THAYER — GS AC 71 71 77
86 VICTORIA ROAD
ASHEVILLE 28801 704 253-2396
TULANE U

11. BUNCOMBE COMPONENT SOCIETY (Continued)

GENTLING, PETER ALLEN GS AC
5-D DOCTOR'S PARK 64 64 72
ASHEVILLE 28801 704 252-2457
NORTHWESTERN U

HAHNER, MATTHEW GS AC
675 BILTMORE AVE., STE. D 80 00 86
ASHEVILLE 28803 704 251-2523
CENTRAL DEL ESTE

HAZLEHURST, JOHN LIVINGSTON GS AC
16 MCDOWELL STREET 56 56 66
ASHEVILLE 28801 704 252-3366
U OF NC

HENDERSON, JOHN ARTHUR GS AC
117 RATHFARNHAM CIRCLE 45 45 72
ASHEVILLE 28803 704 254-2341
U OF ILLINOIS

JOHNSON, RANDALL DIVAN GS /VS AC
16 MCDOWELL STREET 75 77 83
ASHEVILLE 28801 704 252-3366
U OF MICHIGAN

KELEHER, MICHAEL FRANCIS GS L/RT
18 MAYWOOD ROAD 40 40 49
ASHEVILLE 28804 704 254-1835
U OF COLORADO

MAUTERER, DAVID JOHN GS AC
50 DOCTORS DR. #105 85 86 90
ASHEVILLE 28801 704 253-1529
U OF MARYLAND

MCGUIRE, JOHN O'BRIEN GS /VS AC
16 MCDOWELL STREET 71 72 79
ASHEVILLE 28801 704 252-3366
DUKE

NAILLING, RICHARD CABOT GS /GYN L
5 DOCTOR'S PARK 40 43 44
ASHEVILLE 28801 704 254-6381
VANDERBILT U

POWELL, JACK GS L/RT
1051 JAUWPPD RPAD 47 50 54
ASHEVILLE 28806 704 667-3533
LOMA LINDA U

RERYCH, STEPHEN KARL GS /TS AC
M105 DOCTORS BUILDING 74 86 90
ASHEVILLE 28801 704 253-1529
COLUMBIA U

TURK, ROBERT SPENCER GS AC
3-D DOCTORS PARK 56 56 64
ASHEVILLE 28801 704 258-8206
EMORY U

WORLEY, JAMES HARR GS L/RT
401 VANDERBILT ROAD 32 32 35
ASHEVILLE 28803 704 254-2361
U OF TENNESSEE

GYNECOLOGY

BARBER, JOHN FRANCIS GYN L/RT
157 WINDSOR RD. 40 41 48
ASHEVILLE 28804 704 253-7209
U OF PENN

GRAY, CRAIGAN LUTHER GYN AC
143 ASHELAND AVENUE 68 68 78
ASHEVILLE 28801 704 258-9191
LOMA LINDA U

RATHBUN, LEWIS STANDISH GYN L/RT
76 FOREST RD. 39 47 48
ASHEVILLE 28803 704 274-0748
HARVARD

WILSON, CATHERINE MARIE GYN AC
143 ASHELAND AVENUE 63 68 70
ASHEVILLE 28801 704 258-9191
LOMA LINDA U

HEMATOLOGY

CIPPERLY, VAUGHAN ROBERT HEM /ON AC
80 VICTORIA RD. 80 88 90
ASHEVILLE 28801 704 258-0994
AUTONOMA UNIV

HEAD AND NECK SURGERY

POWELL, JAMES BLACKMON, II HNS /PSF AC
131 MCDOWELL STREET 65 65 74
ASHEVILLE 28801 704 254-3517
U OF ALABAMA

HAND SURGERY

DRAY, GREGORY JOSEPH HS /ORS AC
20 MCDOWELL ST. 73 73 80
ASHEVILLE 28801 704 253-7521
OHIO STATE U

MINKIN, BRUCE IRVING HS AC
20 MCDOWELL ST. 80 83 88
ASHEVILLE 28801 704 258-0847
U OF TENNESSEE

NEIMKIN, RONALD JAY HS AC
20 MCDOWELL ST. 75 76 88
ASHEVILLE 28801 704 253-7521
CORNELL U

INFECTIOUS DISEASES

BOERNER, ROBERT MARTIN ID /PUD AC
520 BILTMORE AVENUE 61 61 72
ASHEVILLE 28801 704 254-5932
U OF NC

DEALY, DARILYN HEDDEN ID /IM AC
445 BILTMORE CTR., STE. 500 79 79 85
ASHEVILLE 28801 704 258-9635
DUKE

LEE, TERRENCE JOHN ID /IM AC
445 BILTMORE CTR., STE. 500 72 74 79
ASHEVILLE 28801 704 258-9635
GEORGETOWN U

MCKENNA, WILLIAM R. ID AC
445 BILTMORE CENTER, STE. 404 78 81 87
ASHEVILLE 28801 704 258-9635
U OF PENN

RIBNER, BRUCE STEVEN ID /IM AC
109 BEE ST. 70 71 87
CHARLESTON VA MED. CTR.
CHARLESTON, SC 29403 803 577-5011
HARVARD

INTERNAL MEDICINE

BAZEMORE, WEBSTER CARLYLE, JR. IM /PUD AC
30 CHOCTAW ST. 80 85 90
ASHEVILLE 28801 704 255-7733
EMORY U

BISSELL, LEWIS F. IM AC
12 ROUND OAK ROAD 49 49 86
ASHEVILLE 28804 704 254-0663
U OF ARKANSAS

BUNCH, MARY ELIZABETH IM /PUD L/RT
P. O. BOX 956 51 51 57
BLACK MOUNTAIN 28711 704 669-8117
BOWMAN GRAY

BUSH, RONALD EARL IM AC
2561 HENDERSONVILLE RD. 67 68 76
ARDEN 28704 704 684-0011
LOMA LINDA U

CORCORAN, EDWIN EMMONS IM /GE L/RT
49 MCDOWELL ST. 37 37 48
ASHEVILLE 28801 704 258-3870
MED U OF SC

CROW, SAMUEL LESLIE IM /CD L/RT
4 CROWFIELD DR. #F 25 26 27
ASHEVILLE 28803 704 252-5633
EMORY U

DEAN, JOHN NEWELL IM AC
147 ASHLAND AVENUE 74 75 79
ASHEVILLE 28801 704 258-1188
EMORY U

DODD, RICHARD CRAIG IM /END AC
445 BILTMORE CTR., STE. 302 78 81 90
ASHEVILLE 28801 704 253-6812
U OF CHICAGO

DOLAN, DANIEL LYNN IM /CD AC
9 BAIRD MOUNTAIN ROAD WEST 55 55 7
ASHEVILLE 28804 704 658-267
VANDERBILT U

ELMORE, MILES IM /NEP AC
10 MCDOWELL STREET 71 75 7
ASHEVILLE 28801 704 258-854
MED U OF SC

FARMER, WOODARD EASON IM L
27 PARK RD. 39 47 4
ASHEVILLE 28813 704 274-071
TULANE U

FOWLER, WILLIAM BRIGHT IM AC
675 BILTMORE AVENUE 56 56 6
ASHEVILLE 28803 704 252-183
BOWMAN GRAY

GARRETT, JOHN WILLIAM IM AC
30 CHOCTAW ST. 83 85 9
ASHEVILLE 28801 704 254-088
CORNELL U

GLANCE, GREGORY LYNN IM AC
416 DOCTOR'S BLDG. 86 00 8
ASHEVILLE 28801 704 253-044
BOWMAN GRAY

HENRY, OZMER LUCAS, JR. IM AC
117 DEER LAKE DR. 48 49 5
ASHEVILLE 28803 704 669-311
BOWMAN GRAY

HILL, ARTHUR THEODORE, JR. IM AC
147 ASHLAND AVENUE 56 56 6
ASHEVILLE 28801 704 258-118
BOWMAN GRAY

HILL, HAYWOOD NORTHROP, JR. IM AC
445-BILTMORE CTR., STE. 407 70 70 7
ASHEVILLE 28801 704 258-039
BOWMAN GRAY

JACKSON, DON VERNON, JR. IM /ON AC
ONE DOCTORS DR. 72 72 8
ASHEVILLE 28801 919 748-208
U OF VIRGINIA

KUBITSCHECK, KENNETH R. IM AC
445 BILTMORE CTR., STE. 407 78 78 8
ASHEVILLE 28801 704 258-039
BAYLOR

LANDIS, SUZANNE E. IM AC
491 BILTMORE AVE. 78 81 8
ASHEVILLE 28801 704 258-063
U OF PENN

LANSING, ANN MEREDITH IM AC
215 DOCTORS BLDG. 81 84 8
ASHEVILLE 28801 704 255-883
DUKE

LEE, IL SUNG IM AC
P. O. BOX 370 66 75 7
ENKA 28728 704 667-529
CATHOLIC U

LIND, RICHARD NORMAN IM /ON AC
80 VICTORIA ROAD 77 78 9
ASHEVILLE 28801 704 258-099
U OF ILLINOIS

LITTLEJOHN, JAMES TALMADGE IM /CD L/RT
6 FAIRWAY PL. 45 51 5
ASHEVILLE 28803
U OF PENN

MADDOX, CHARLES DEATON IM AC
4-B DOCTOR'S PARK 66 66 7
ASHEVILLE 28801 704 253-286
MED COLL OF GA

POZNER, ROBERT S. IM AC
445 BILTMORE CTR. STE. 305 84 75 8
ASHEVILLE 28801 704 253-148
EAST CAROLINA U

PUCKETT, JAMES BUTLER IM /ON AC
390 COPPERFIELD BLVD. 74 74 8
CONCORD 28025 704 782-313
U OF NC

RICE, LUCIAN CANDLER, JR. IM AC
147 ASHELAND AVENUE 70 71 7
ASHEVILLE 28801 704 258-118
EMORY U

ROBERTS, ROY FOSTER IM /CD L
21 GRIFFING BLVD. 33 33 3
ASHEVILLE 28804 704 253-654
TULANE U

11. BUNCOMBE COMPONENT SOCIETY (Continued)

ROSENBERG, JOEL BENJAMIN IM AC
445 BILTMORE CENTER, STE. 305 77 77 81
ASHEVILLE 28801 704 253-1482
U OF CONNECTICUT

RUSSELL, DONALD WAYNE IM /AI AC
210 ASHELAND AVE. 84 86 90
ASHEVILLE 28801 704 253-3382
EMORY U

RUSSELL, PHILIP EVERITT IM /PUD L/RT
204 DOCTOR'S BUILDING 50 54 54
ASHEVILLE 28801 704 274-3560
DUKE

STEELE, RICHARD AUSTIN IM /CD AC
445 BILTMORE AVE. STE. 408 56 56 63
ASHEVILLE 28801 704 258-9083
DUKE

STEPHENS, FREEMAN IRBY IM L/RT
54 SUNSET PARKWAY 40 40 48
ASHEVILLE 28801 704 253-8178
COLUMBIA U

THRASH, WILLIAM VIRGIL IM AC
147 ASHELAND AVENUE 70 71 76
ASHEVILLE 28801 704 258-1188
MED COLL OF GA

WELLS, ROBERT STANLEY IM AC
445 BILTMORE CTR., STE. 407 80 83 85
ASHEVILLE 28801 704 258-0397
U OF OKLAHOMA

WITTEN, ERNEST ROBERT SIDNEY IM L/RT
80 WEMBLEY RD. 44 44 50
ASHEVILLE 28804 704 253-5707
GEORGETOWN U

EUROLOGY

DURHAM, CECIL TRACY, JR. N AC
7 MCDOWELL STREET 66 66 74
ASHEVILLE 28801 704 255-7776
MED U OF SC

LEDBETTER, JOHN WINSLOW N AC
7 MCDOWELL STREET 53 53 59
ASHEVILLE 28801 704 255-7776
BOWMAN GRAY

MARTIN, DENNIS LEE N AC
7 MCDOWELL ST. 65 65 74
ASHEVILLE 28801 704 255-7776
U OF VIRGINIA

MCGHEE, TERENCE BARCLAY N /IM AC
7 MCDOWELL STREET 76 77 81
ASHEVILLE 28801 704 255-7776
MED COLL OF GA

RARDIN, DUFF ANDREW N AC
190-W DOCTORS BLDG. 86 90 90
ASHEVILLE 28801 704 252-6066
BOWMAN GRAY

TAYLOR, REID D. N AC
7 MCDOWELL ST. 83 83 88
ASHEVILLE 28801 704 255-7776
U OF FLORIDA

YOUNG, MICHAEL HARRILL N /IM AC
50 DOCTOR'S DR., STE. 190W 75 78 82
ASHEVILLE 28801 704 252-6066
U OF NC

EPHROLOGY

CREWS, HARRY DENNISTON NEP /IM AC
10 MCDOWELL STREET 64 64 72
ASHEVILLE 28801 704 258-8545
JOHNS HOPKINS

EONATAL-PERINATAL MEDICINE

LITZENBERGER, W. A. DREW NPM /PD AC
304-M DOCTOR'S BLDG. 78 82 83
ASHEVILLE 28801 704 253-1998
U OF KENTUCKY

NEUROLOGICAL SURGERY

LOOMIS, RALPH CHARLES NS AC
7 MCDOWELL STREET 76 77 83
ASHEVILLE 28801 704 255-7776
INDIANA U

MCKEEL, MILLARD FILMORE NS L/RT
445 BILTMORE AVE. 49 49 56
ASHEVILLE 28801 704 258-8500
U OF ILLINOIS

SCHULHOF, LARY ALAN NS AC
7 MCDOWELL STREET 69 69 75
ASHEVILLE 28801 704 255-7776
INDIANA U

STRANGES, STEVEN M. NS AC
7 MCDOWELL ST. 81 87 87
ASHEVILLE 28801 704 255-7778
UNIV. OF S.C.

VAN-BLARICOM, LAWRENCE S. NS AC
445 BILTMORE AVE. 49 49 58
ASHEVILLE 28801 704 255-8096
DALHOUSIE U

WEISS, RICHARD ELLIOTT NS AC
7 MCDOWELL STREET 64 64 73
ASHEVILLE 28801 704 255-7776
STANFORD U

OBSTETRICS AND GYNECOLOGY

BRANNAN, WILLIAM CHESTER OBG AC
143 ASHELAND AVENUE 68 69 81
ASHEVILLE 28801 704 258-9191
LOMA LINDA U

CALLAGHAN, WILLIAM M. OBG AC
143 ASHELAND AVE. 81 84 85
ASHEVILLE 28801 704 258-9191
OHIO STATE U

CAMPBELL, ALLEN BARRY OBG AC
93 VICTORIA ROAD 61 68 68
ASHEVILLE 28801 704 253-4821
COLUMBIA U

COUNCELL, RICHARD BRUCE OBG AC
120 W. ANNEX 81 82 89
DOCTORS BLDG.
ASHEVILLE 28801 704 252-1050
BOWMAN GRAY

CUELLAR, JOHN PATRICK, III OBG AC
143 ASHELAND AVE. 85 86 90
ASHEVILLE 28801 704 253-2240
U TX-SOU.WESTERN

DAVIS, PHILIP COLEMAN OBG AC
93 VICTORIA ROAD 64 64 72
ASHEVILLE 28801 704 253-4821
MED COLL OF VA

GRANT, GREGORY OBG AC
2561 HENDERSONVILLE RD. 79 79 88
PO BOX 549
ARDEN 28074 704 687-1435
TULANE U

HILL, STEPHEN THOMAS OBG AC
143 ASHELAND AVE. 80 80 84
ASHEVILLE 28801 704 258-9191
WEST VA U

HINMAN, HAVILAH EDWARD OBG L/RT
7 RATHFARNUM RD. 36 36 49
ASHEVILLE 28803 704 684-6243
U OF VERMONT

JOHNSON, PAUL D. OBG C
110 W. GROVER ST. 83 85 87
SHELBY 28150 704 487-5258
U OF TENNESSEE

KITTNER, PHILIP JOEL OBG AC
80 VICTORIA ROAD 64 64 71
ASHEVILLE 28801 704 255-8900
NEW YORK MED COL

LAWRENCE, HAL CLIFFORD, III OBG AC
60 LIVINGSTON ST. 75 75 79
ASHEVILLE 28801 704 254-5126
INDIANA U

LYLES, EVELYN MCMASTER OBG AC
93 VICTORIA ROAD 81 82 87
ASHEVILLE 28801 704 253-4821
MED U OF SC

MCDUFFIE, ROBERT STANLEY OBG L/RT
325 VANDERBILT RD. 44 44 54
ASHEVILLE 28803 704 274-2795
EMORY U

MORRIS, ARTHUR SHERMAN, JR. OBG AC
80 VICTORIA ROAD 59 59 69
ASHEVILLE 28801 704 255-8900
U OF NC

PORTER, CEDRIC WARREN, JR. OBG /GPM AC
93 VICTORIA ROAD 64 65 73
ASHEVILLE 28801 704 253-4821
COLUMBIA U

RANKIN, CHARLES ALBERT, JR. OBG AC
80 VICTORIA ROAD 54 67 68
ASHEVILLE 28801 704 255-8900
JEFFERSON

SANDRIDGE, DAVID ALLEN OBG AC
50 DOCTORS DR. #120 W.ANNEX 65 65 74
ASHEVILLE 28801 704 255-8900
MED COLL OF VA

SLUDER, FLETCHER SUMPTER OBG L/RT
472 CHUNN'S COVE ROAD 38 38 46
ASHEVILLE 28805 704 252-7374
RUSH MED COLL

OCCUPATIONAL MEDICINE

STANLEY, SHERBURN MOORE OM L/RT
ROUTE #1, BOX 5 40 40 50
TODD 28684 704 264-4274
MCGILL U

ONCOLOGY

MOFFATT, ROBERT CARR ON /GS AC
445 BILTMORE CTR., STE.102 57 65 66
ASHEVILLE 28801 704 258-2464
U OF TENNESSEE

PASCHAL, BARTON RILEY ON /HEM AC
ONE DOCTORS DR. 76 76 81
ASHEVILLE 28801 704 254-8232
EMORY U

WEAVER, ZEBULON, III ON /HEM AC
80 VICTORIA ROAD 61 61 65
ASHEVILLE 28801 704 258-0994
U OF NC

OPHTHALMOLOGY

BEARDSLEY, THOMAS LEWIS OPH AC
495 BILTMORE AVE. 77 80 77
ASHEVILLE 28801 704 258-1586
DUKE

BROSNAN, WALTER HAWKINS OPH AC
2 DOCTORS PARK 85 86 89
417 BILTMORE AVE.
ASHEVILLE 28801 704 254-9693
MED U OF SC

FRY, JOHN RUDOLPH OPH AC
20/20 PLAZA 59 65 66
90 ASHELAND AVENUE
ASHEVILLE 28801 704 253-5656
U OF WISCONSIN

ISBEY, EDWARD K., III OPH AC
495 BILTMORE AVE. 81 82 88
ASHEVILLE 28801 704 258-1586
U OF NC

ISBEY, EDWARD KENNETH, JR. OPH AC
495 BILTMORE AVENUE 55 61 61
ASHEVILLE 28801 704 258-1586
WAYNE STATE U

KILLIAN, JOHN HUME OPH AC
276 E. CHESTNUT STREET 67 67 75
ASHEVILLE 28801 704 255-8978
BOWMAN GRAY

MCCALL, WILLIAM HERBERT OPH L
930 COUNTRY CLUB RD. 38 38 41
ASHEVILLE 28804 704 253-0421
MED COLL OF VA

MCLEAN, WALTER COPLEY, JR. OPH AC
276 E. CHESTNUT ST. 75 76 82
ASHEVILLE 28801 704 255-8978
U OF VIRGINIA

11. BUNCOMBE COMPONENT SOCIETY (Continued)

MOORE, EDWARD EUGENE OPH L
3 DOCTOR'S PARK 42 47 48
ASHEVILLE 28801 704 252-6741
HARVARD

PAYNE, WINSTON CHARLES OPH AC
20/20 PLAZA,90 ASHLAND AVE. 67 68 74
ASHEVILLE 28801 704 253-4735
U OF MICHIGAN

POWELL, WILLIAM FLYNN OPH /OTO L/RT
62 GERTRUDE PLACE 37 38 46
ASHEVILLE 28801 704 252-8931
DUKE

WOODARD, MARSHALL WAYNE OPH L/RT
607 FLATIRON BUILDING 43 54 55
ASHEVILLE 28801 704 252-5668
DUKE

ORTHOPEDIC SURGERY

BURKHARDT, NATHAN LESLIE, JR. ORS AC
129 MCDOWELL ST. 59 66 66
ASHEVILLE 28801 704 258-8800
U OF TENNESSEE

CALLISON, WILLIAM JOSEPH ORS AC
STE. 101, 445 BILTMORE CENTER 53 60 60
ASHEVILLE 28801 704 254-7271
VANDERBILT U

CAPPIELLO, DAVID LAWRENCE ORS AC
129 MCDOWELL STREET 64 64 71
ASHEVILLE 28801 704 258-8800
CORNELL U

CROSBY, EDWARD BROWN ORS /HS AC
PO BOX 1980 68 69 75
ASHEVILLE 28802 704 258-0847
U OF ALABAMA

DEMENT, JOSEPH MILLER ORS AC
111 VICTORIA RD. 83 83 88
ASHEVILLE 28801 704 252-7331
U OF TENNESSEE

DOYLE, LORRAINE KERLICK ORS /HS AC
111 VICTORIA AT OAKLAND RD. 77 78 89
ASHEVILLE 28801 704 252-7331
MED COLL OF PENN

EGLINTON, DANIEL THOMAS ORS AC
53 S. FRENCH BROAD 78 82 84
ASHEVILLE 28801 704 252-7180
U OF NEW MEXICO

GALLOWAY, JAMES BRUCE ORS L/RT
GALLOWAY DR. 44 49 50
ASHEVILLE 28803 704 274-2236
QUEENS U

JARRETT, DAVID LINCOLN ORS AC
53 S. FRENCH BROAD ST. 63 63 74
ASHEVILLE 28801 704 252-7180
LOMA LINDA U

KROLL, LARRY LEROY ORS AC
53 S. FRENCH BROAD ST. 65 66 75
ASHEVILLE 28801 704 252-7180
LOMA LINDA U

LINCOLN, DAVID OGDEN ORS AC
69 MCDOWELL ST. 65 67 73
ASHEVILLE 28801 704 255-7526
ST U OF NY-BUFF

MCCULLOUGH, CHARLES T.,JR. ORS AC
129 MCDOWELL ST. 61 61 71
ASHEVILLE 28801 704 258-8800
VANDERBILT U

MONTGOMERY, WAYNE SWOPE ORS AC
129 MCDOWELL ST. 48 55 55
ASHEVILLE 28801 704 258-8800
WAYNE STATE U

MULLIS, DONALD LEE ORS AC
111 VICTORIA ROAD 72 73 80
ASHEVILLE 28801 704 252-7331
U OF MIAMI

SAENGER, PAUL JAY ORS AC
129 MCDOWELL ST. 76 76 85
ASHEVILLE 28801 704 258-8800
U OF NC

SEVERN, HENRY DOELLER ORS L/RT
4 PINE TREE RD. 40 40 47
ASHEVILLE 28804 704 252-9948
JOHNS HOPKINS

SPENCER, JOHN PAUL ORS AC
111 VICTORIA AT OAKLAND 72 76 79
ASHEVILLE 28801 704 252-7331
U OF CA-DAVIS

THOMPSON, JAMES STEVENS ORS /HS AC
20 MCDOWELL ST. 70 76 76
ASHEVILLE 28801 704 253-7521
U OF OKLAHOMA

WEILBAECHER, JAMES EDWARD, JR. ORS AC
129 MCDOWELL STREET 58 58 75
ASHEVILLE 28801 704 258-8800
LA STATE U

WESTLY, STEPHEN K. ORS /HS AC
PO BOX 1980 79 80 88
ASHEVILLE HAND CTR., PA
ASHEVILLE 28802 704 258-0847
TULANE U

WILLETT, EUGENE STANLEY ORS AC
111 VICTORIA AT OAKLAND ROAD 69 70 77
ASHEVILLE 28801 704 252-7331
MED COLL OF VA

OTOLARYNGOLOGY

BAGLEY, CARTER SNOW OTO /HNS AC
131 MCDOWELL STREET 59 59 69
ASHEVILLE 28801 704 254-3517
U OF VIRGINIA

COSTENBADER, WM. B., JR. OTO /HNS AC
131 MCDOWELL STREET 64 64 71
ASHEVILLE 28801 704 254-3517
U OF VIRGINIA

OLINGER, BENJAMIN RAY OTO /HNS AC
131 MCDOWELL STREET 60 67 67
ASHEVILLE 28801 704 254-3517
U OF VIRGINIA

PATE, BARRY REEVES OTO /HNS AC
285 MCDOWELL STREET 58 59 62
ASHEVILLE 28803 704 252-1853
U OF NC

SEAL, STEPHEN RANDAL OTO AC
131 MCDOWELL 83 83 90
ASHEVILLE 28801 704 254-3517
LSU-SHREVEPORT

WALLENBORN, PETER AMBROSE,III OTO AC
28 GRIFFING BLVD. 79 84 85
ASHEVILLE 28804 704 252-1853
U OF VIRGINIA

WILLIAMS, CHARLES EMERY OTO /HNS AC
285 MCDOWELL STREET 63 63 75
ASHEVILLE 28803 704 252-1853
LA STATE U

PSYCHIATRY

ANIXTER, WILLIAM L. P AC
PO BOX 1101 77 78 88
HIGHLAND HOSPITAL
ASHEVILLE 28802 704 254-3201
GEO WASHINGTON U

BALDWIN, MARIE P /PN L/RT
PO BOX 173 29 29 51
DUE WEST, SC 29639
MED U OF SC

BONNER, JACK WILBUR,III P AC
BOX 1101, HIGHLAND HOSPITAL 65 65 71
ASHEVILLE 28802 704 254-3201
U TX-SOU.WESTERN

BUIE, STEPHEN E. P /IM AC
HIGHLAND HOSPITAL 81 82 87
PO BOX 1101
ASHEVILLE 28802 704 254-3201
U OF NC

BURNS, MARGARET VIRGINIA P L
POB 8724 37 48 49
ASHEVILLE 28814 704 253-3398
DUKE

BYRON, ROBERT SILL P AC
675 BILTMORE AVENUE 64 64 69
ASHEVILLE 28803 704 254-5369
U OF CINCINNATI

DOSS, GEORGE WESTON P AC
HIGHLAND HOSPITAL 53 53 77
P. O. BOX 1101
ASHEVILLE 28802 704 254-3201
U TX-SOU.WESTERN

FELIX, RICHARD R. P /PYM AC
HIGHLAND HOSPITAL 72 72 79
PO BOX 1101
ASHEVILLE 28802 704 254-3201
OHIO STATE U

GOLLBERG, HAROLD RONALD P /GER AC
445 BILTMORE CENTER, STE. 304 66 66 72
ASHEVILLE 28801 704 252-1421
U OF TEXAS

GRIFFIN, ROBERT ASHLEY P /N L/RT
APPALACHIAN HALL, BOX 5534 51 52 56
ASHEVILLE 28813 704 253-3681
TEMPLE U

GRIFFIN, WILLIAM RAY, JR. P /N L/RT
30 HILLTOP ROAD 44 45 48
ASHEVILLE 28803 704 253-3681
JEFFERSON

HOFFMAN, JUDITH L. P AC
38 WESTCHESTER DR. 83 86 88
ASHEVILLE 28803 704 254-3201
MI. ST U-OST MED

HUFFMAN, ROBERT EDWARD P AC
146 VICTORIA ROAD 63 63 71
ASHEVILLE 28801 704 253-3695
U OF TENNESSEE

JACKSON, LINDA HALL P /CHP AC
PO BOX 1101 67 68 89
HIGHLAND HOSPITAL
ASHEVILLE 28802 704 254-3201
U OF NC

KRUEGER, ALAN LEE P AC
90 SOUTHSIDE AVE. STE. 200 67 68 79
ASHEVILLE 28801 704 252-6680
U OF KANSAS

MAHORNEY, STEVEN LOUIS P AC
HIGHLAND HOSPITAL 73 73 90
ASHEVILLE 28801 704 254-3201
LA STATE U

MASTERS, KIM JAMES P /CHP AC
APPALACHIAN HALL 72 74 85
PO BOX 5534
ASHEVILLE 28813 704 253-3681
HARVARD

NEBLETT, DONALD THOMAS P AC
932 HENDERSONVILLE RD. 58 59 78
FOREST CENTER, STE. 101
ASHEVILLE 28803 704 274-1415
U OF TENNESSEE

PAYTON, JAMES BAYARD P /CHP AC
PO BOX 1101 73 73 89
ASHEVILLE 28802 704 254-3201
U OF CINCINNATI

PETERSON, ERIC WEBSTER P AC
5 CROWNINGWAY DR. 71 71 82
ASHEVILLE 28804 704 254-3201
DUKE

POTTS, LEO JOSEPH P AC
HIGHLAND HOSPITAL 55 54 82
PO BOX 1101
ASHEVILLE 28802 704 254-3201
U OF ADELAIDE

SAGBERG, ANNE ELISABETH P L/RT
343 BARNARD AVENUE 47 58 59
ASHEVILLE 28804 704 254-3201
U OF OSLO

SCHROEDER, KARL VINCENT P AC
61 FAIRCREST RD. 84 84 90
ASHEVILLE 28804 704 253-3681
U OF KENTUCKY

SELMAN, RICHARD DAVID P /ALD AC
HIGHLAND HOSPITAL 72 72 73
P. O. BOX 1101
ASHEVILLE 28802 704 254-3201
EMORY U

SIEGEL, GLENN N. P AC
HIGHLAND HOSPITAL 75 77 87
PO BOX 1101
ASHEVILLE 28802 704 254-3201
NORTHWESTERN U

11. BUNCOMBE COMPONENT SOCIETY (Continued)

STEWART, BETTY G. P /N AC
65 69 88
PO BOX 1101
HIGHLAND HOSPITAL
ASHEVILLE 28802 704 254-3201
DUKE

THIELMAN, SAMUEL B. P /GER AC
80 82 89
29 RAVENSCROFT DR.
ASHEVILLE 28801 704 253-9472
DUKE

THORNE, NORMAN ALAN P /R AC
58 58 64
215 OLD TOLL RD.
ASHEVILLE 28804 704 258-2804
DUKE

WEISENBERGER, ANTHONY JOSEPH P AC
71 72 82
APPALACHIAN HALL
P. O. BOX 5534
ASHEVILLE 28813 704 253-3681
WASHINGTON U

PEDIATRICS

BAILEY, JOHN BENNETT PD AC
75 75 81
131 MCDOWELL STREET
ASHEVILLE 28801 704 254-4337
U OF TEXAS

BRANNON, SUSAN ANN PD AC
87 88 90
131 MCDOWELL ST.
ASHEVILLE 28801 704 254-4337
U OF ALABAMA

BROWN, CYNTHIA J. HECKER PD AC
85 85 90
77 MCDOWELL RD.
ASHEVILLE 28801 704 684-1000
U OF MISSOURI

BRYAN, WILLIAM ALEXANDER, III PD AC
68 68 75
ASTON PARK CENTER
53 S. FRENCH BROAD AVENUE
ASHEVILLE 28801 704 258-0969
LOMA LINDA U

CHILDERS, TERRY CELY PD AC
80 82 85
131 MCDOWELL ST.
ASHEVILLE 28801 704 254-9811
U OF VIRGINIA

DALTON, ALVIN STANLEY, JR. PD /NPM AC
76 77 90
50 DOCTORS DR. 304-M
ASHEVILLE 28801 704 253-1998
LOMA LINDA U

HUFF, OLSON PD AC
62 66 70
THOM'S REHAB. HOSP.
PO BOX 15025
ASHEVILLE 28813 704 274-2400
U OF LOUISVILLE

LONG, CAROL ANN PD AC
85 86 90
131 MCDOWELL ST.
ASHEVILLE 28801 704 254-4337
PENN STATE U

MACALPINE, ORVILLE DUNCAN PD L/RT
40 40 49
98 HOLLY HILL DR.
CANDLER 28715 704 667-5553
LOMA LINDA U

MCCONNELL, MARY HELEN PD S/RT
50 55 55
675 BILTMORE AVENUE
ASHEVILLE 28803 704 253-1641
GEO WASHINGTON U

RAVE, CECELIA MARIE PD AC
84 85 89
77 MCDOWELL ST.
ASHEVILLE 28801 704 254-5320
U OF CINCINNATI

SCHUTTE, HAROLD DELANO PD AC
62 63 63
53 S. FRENCH BROAD AVE.
ASHEVILLE 28801 704 258-0969
LOMA LINDA U

YODER, CHARLES DEWAYNE PD /NPM AC
74 74 78
50 DOCTOR'S DR., STE. 304M
ASHEVILLE 28801 704 253-1998
U OF NC

PHYSICAL MEDICINE AND REHABILITATION

BURKE, MARGARET OBER PM AC
85 86 89
PO BOX 15025
ASHEVILLE 28813 704 274-2400
U OF MARYLAND

JOHNSON, TODD CLAYTON PM AC
80 81 88
PO BOX 15025
ASHEVILLE 28813 704 274-2400
BOWMAN GRAY

MALONEY, SEAN ROBERT PM AC
80 81 84
445 BILTMORE AVE. STE. 106
ASHEVILLE 28801 704 254-9796
EMORY U

SHIELDS, CHARLES ROBERT PM AC
80 81 84
PO BOX 15025
ASHEVILLE 28813 704 274-2400
U OF OKLAHOMA

WHITE, TERRY EDWARD PM AC
80 83 86
PO BOX 15025
ASHEVILLE 28813 704 274-2400
U OF MISSOURI

PLASTIC SURGERY

ISRAEL, JOHN ROBERT PS AC
62 62 75
5 LIVINGSTON STREET
ASHEVILLE 28801 704 253-7000
U OF PITTSBURGH

PATHOLOGY, ANATOMICAL AND CLINICAL

BIGGERS, DAVID CARL PTH AC
58 58 78
MEMORIAL MISSION HOSPITAL
ASHEVILLE 28801 704 255-4270
U OF NC

LYSKO, JANE E. PTH AC
81 82 87
ST. JOSEPH'S HOSPITAL
DEPT. OF PATHOLOGY
ASHEVILLE 28801 704 255-3949
U OF NC

MORRISON, ROGER WILLIAM PTH /CLP L/RT
43 51 52
4 LUCKY LANE
ASHEVILLE 28804 704 252-4868
HARVARD

SQUIRES, RAYMOND JAY PTH AC
69 72 78
49 FOREST ROAD
ASHEVILLE 28803 704 274-4664
EMORY U

TEAFORD, MICHAEL JACOB PTH AC
76 78 89
ST. JOSEPH'S HOSPITAL
ASHEVILLE 28801 704 255-3943
MED COLL OF GA

PULMONARY DISEASES

DOMBY, WILLIAM ROGER PUD /IM AC
72 73 80
30 CHOCTAW STREET
ASHEVILLE 28801 704 255-7733
MED COLL OF VA

HAPKE, EDITH JOSEPHINE PUD /IM AC
56 62 73
70 WOODFIN PL., STE. 304
ASHEVILLE 28801 704 254-8878
FREIEN U

HELLREICH, MARK A. PUD AC
81 84 88
30 CHOCTAW ST.
ASHEVILLE 28801 704 255-7733
BOWMAN GRAY

O'CAIN, CHARLES FRANK PUD /CCM AC
73 74 81
30 CHOCTAW STREET
ASHEVILLE 28801 704 255-7733
EMORY U

TROXLER, DAVID HAYS PUD AC
74 75 85
30 CHOCTAW ST.
ASHEVILLE 28801 704 255-7733
DUKE

RADIOLOGY

BARNHARDT, LUTHER ERNEST, JR. R /NM AC
58 58 64
900 MEDICAL CT., STE. A
PO BOX 910
MARION 28752 704 652-4630
DUKE

BLINN, LAWRENCE ALLAN R AC
83 86 88
PO BOX 2959
103 DOCTORS BLDG.
ASHEVILLE 28802 704 254-4517
JEFFERSON

CRIGLER, NORRIS WOLF, JR. R AC
76 76 81
P. O. BOX 2959
ASHEVILLE 28801 704 254-4617
DUKE

GARRETT, JANET BEER R AC
83 83 90
PO BOX 2959
ASHEVILLE 28802 704 254-4617
CORNELL U

KENNEDY, THOMAS FRANCIS R AC
68 69 74
P. O. BOX 2959
ASHEVILLE 28802 704 254-4617
U OF MICHIGAN

MONTGOMERY, JAMES HUGH R /IM AC
78 78 85
445 BILTMORE CTR., STE. 301
ASHEVILLE 28801 704 255-3565
U OF TENNESSEE

OLBRANTZ, KEITH R. R AC
82 83 87
445 BILTMORE CTR., STE. 301
ASHEVILLE 28801 704 254-2371
U OF WISCONSIN

PETERSON, NEIL PAUL R /NM AC
79 78 84
P. O. BOX 2959
ASHEVILLE 28802 704 254-4617
NORTHWESTERN U

SHARPE, EUGENE BAXTER R /NM RT
52 52 59
200 PATTON MTN. ROAD
ASHEVILLE 28804 704 252-1546
NORTHWESTERN U

WIEST, HELEN HYMAN R C
84 90 90
PO BOX 2959
ASHEVILLE 28802 704 254-4617
MED U OF SC

RHEUMATOLOGY

GOUGH, WILLIAM, III RHU /IM AC
76 77 83
445 BILTMORE CENTER, STE. 306
ASHEVILLE 28801 704 258-9533
U OF ROCHESTER

MENDELSOHN, STEVEN LOUIS RHU /IM AC
78 79 84
445 BILTMORE CTR., STE. 306
ASHEVILLE 28801 704 258-9533
U OF ROCHESTER

RARDIN, THOMAS EDWIN RHU AC
62 62 72
43 OAKLAND ROAD
ASHEVILLE 28801 704 253-2824
CASE WESTERN RES

VARGO, JILL SCOTT RHU AC
84 84 90
445 BILTMORE AVE., STE. 306
ASHEVILLE 28801 704 258-9533
MARSHALL U

THERAPEUTIC RADIOLOGY

HASLAM, JOHN BATTLE TR AC
65 65 71
200 DOCTOR'S BLDG.
ASHEVILLE 28801 704 255-4100
DUKE

TERRY, RONALD LYNN TR AC
85 85 89
200 DOCTOR'S BLDG.
ASHEVILLE 28801 704 255-4100
MED U OF SC

THOMAS, CHARLES CARROLL, II TR /RO AC
70 70 90
445 BILTMORE AVE., STE. G-109
ASHEVILLE 28801 704 253-7077
U OF NC

WALLER, ROBERT JOSEPH TR AC
73 74 78
200 DOCTOR'S BUILDING
ASHEVILLE 28801 704 255-4100
GEORGETOWN U

THORACIC SURGERY

CHAPMAN, JESSE PUGH, JR. TS /GS L/RT
43 48 53
276 KENILWORTH RD.
ASHEVILLE 28803 704 252-7357
U OF PENN

11. BUNCOMBE COMPONENT SOCIETY (Continued)

FISCHER, MARTIN JOSEPH TS /GS AC
520 BILTMORE AVENUE 61 62 80
ASHEVILLE 28801 704 252-7357
WASHINGTON U

JOHNSON, ALAN MORSE TS /GS AC
257 MCDOWELL ST. 80 80 89
ASHEVILLE 28803 704 258-1121
TULANE U

NOTO, JOSEPH ANTHONY TS /GS AC
520 BILTMORE AVENUE 61 61 71
ASHEVILLE 28801 704 252-7357
U OF PENN

UROLOGICAL SURGERY

ARMSTRONG, BRUCE GRIFFEY U AC
1 DOCTOR'S PARK 75 75 83
ASHEVILLE 28801
BOWMAN GRAY

BITTER, KARL FFOLLIOTT U AC
1 DOCTOR'S PARK 63 63 71
ASHEVILLE 28801 704 253-5314
U OF NC

BRAZIL, WILBURN OSCAR, JR. U AC
100 VICTORIA ROAD 61 66 67
ASHEVILLE 28801 704 254-8883
LA STATE U

FRIEDMAN, ALAN DAVID U AC
100 VICTORIA ROAD 68 69 80
ASHEVILLE 28801 704 254-8883
U OF ALABAMA

MAITLAND, ALEXANDER, III U AC
1 DOCTOR'S PARK 55 61 62
ASHEVILLE 28801 704 253-5314
YALE

SHOOK, EARL LESTER, JR. U L/RT
FF3 CROWFIELDS LANE 52 58 58
ASHEVILLE 28803 704 274-1998
NEW YORK MED COL

SIMPKINS, KENNY LEON U AC
100 VICTORIA DR. 82 83 88
ASHEVILLE 28801 704 254-8883
U OF TEXAS

VANDERBEEK, RANDALL B. U AC
100 VICTORIA RD. 63 63 72
ASHEVILLE 28801 704 254-8883
DUKE

YARBOROUGH, MARK A. U AC
1 DOCTOR'S PARK 83 85 88
ASHEVILLE 28801 704 253-5314
MED U OF SC

12. BURKE COMPONENT SOCIETY

OFFICERS—**President:** Clay W. Richardson, M.D., PO Box 869, Glen Alpine 28628 (704 584-2481)
Secretary: John H. Giles, M.D., 350 E. Parker Rd., Morganton 28655 (704 437-7388)

ANESTHESIOLOGY

KURTS, YURY AN AC
PO BOX 700 65 65 87
VALDESE GEN. HOSPITAL
VALDESE 28690 704 874-2251
TADJIK MED INST

CARDIOVASCULAR DISEASES

EDWARDS, CARL LEON CD /C AC
PO BOX 700 84 84 89
VALDESE GENERAL HOSPITAL
VALDESE 28690 704 874-1720
ST. GEORGE'S U

DERMATOLOGY

BADEN, THOMAS JAMES D /IM AC
2203 S. STERLING ST. 77 78 81
MORGANTON 28655 704 438-4683
EMORY U

DIAGNOSTIC RADIOLOGY

MCGREGOR, JUDITH CRAIG DR C
570 20TH AVENUE CT. NW 85 87 90
HICKORY 28601 704 874-4088
EMORY U

EMERGENCY MEDICINE

SCOTT, DON JOE EM AC
RT. #8, BOX 313 77 78 90
MORGANTON 28655 704 438-2232
U OF ILLINOIS

FAMILY PRACTICE

BARRON, JOHN ISAAC FP L
P. O. BOX 489 50 51 52
MORGANTON 28655 704 437-5641
U OF TENNESSEE

CROFT, JAMES MORRIS FP AC
P. O. DRAWER 849 64 65 65
MORGANTON 28655 704 437-9401
MED COLL OF GA

DEEKENS, STEWART ANDREWS, JR. FP AC
2203 S. STERLING ST. 78 81 84
MORGANTON 28655 704 437-0666
MED COLL OF VA

DELLINGER, CLYDE JAMES FP AC
P. O. BOX 8 61 63 64
DREXEL 28619 704 437-3634
DUKE

HERINGTON, DAVID S. FP AC
2203 S. STERLING ST., STE. 193 83 85 87
MORGANTON 28655 704 438-8171
U OF MARYLAND

HOGSHEAD, RALPH, JR. FP L/RT
P. O. DRAWER 690 43 48 48
MORGANTON 28655 704 437-2232
TEMPLE U

MELTON, JAMES DURANT FP AC
ROUTE #3, BOX 50 70 70 86
MORGANTON 28655 704 437-9401
U OF NC

PLYLER, EDWARD THURMAN FP AC
103 MEDICAL HEIGHTS DR. 81 82 85
MORGANTON 28655 704 437-4211
U OF NC

POWELL, KENNETH ALTON FP AC
P. O. BOX 330 60 60 63
RUTHERFORD COLLEGE 28671 704 874-2107
BOWMAN GRAY

RICHARDSON, CLAY WILLIAM FP AC
PO BOX 869 82 83 89
GLEN ALPINE 28628 704 584-2481
U OF NC

†RIGGS, MILLARD MCADOO FP
105 WOODSWAY LANE 43 47 47
DECEASED--11-15-90
MORGANTON 28655 704 433 -1585
DUKE

SMITH, STEPHEN KEITH FP AC
103 MEDICAL HEIGHTS DR. 86 86 89
MORGANTON 28655 704 437-4211
MED U OF SC

TYLER, RICHARD LYNN FP AC
PO BOX 869 85 85 89
GLEN ALPINE 28628 704 584-2481
LSU-SHREVEPORT

WITHERS, ABNER CARR FP AC
BOX 38 62 62 65
DREXEL 28619 704 437-3694
U OF NC

GASTROENTEROLOGY

BUKHARI, MUSHTAQ AHMAD GE /IM AC
560 MALCOLM BLVD. 68 75 81
WESTERN PIEDMONT CLI.
VALDESE 28671 704 879-8335
SRINAGAR MED SCH

GENERAL PRACTICE

KIRKSEY, WILLIAM ALBERT GP L/RT
302 S. KING STREET 44 47 47
MORGANTON 28655
WASHINGTON U

PETERS, PETER DEMJANTSCHUK GP /EM AC
1115 KATHERINE ST. 40 55 78
VALDESE 28690 704 874-0519
U OF LATVIA

GENERAL SURGERY

DEATON, PLEASANT PAUL GS AC
PO BOX 700 53 60 60
VALDESE 28690 704 874-0555
MED COLL OF VA

FORGY, BYRON KEITH GS AC
341 E. PARKER ROAD 72 74 81
MORGANTON 28655 704 433-6390
U OF MIAMI

GILES, JOHN HENRY GS AC
350 E. PARKER ROAD 59 59 72
MORGANTON 28655 704 437-7388
BOWMAN GRAY

HAIRFIELD, BEVERLY DEW GS L/RT
604 W. UNION ST. 39 39 48
HIGHWAY #18 SOUTH, SUITE #157
MORGANTON 28655 704 437-3362
VANDERBILT U

LEE, KYUNG KUN GS AC
P. O. BOX 2203 57 57 82
MORGANTON 28655 704 433-2463
YONSEI U

LEE, SAE SOON GS /PDS AC
350 E. PARKER RD. 48 48 70
MORGANTON 28655 704 437-7395
YONSEI U

STEELE, WALTER FRANKLIN GS /TS AC
VALDESE GENERAL HOSPITAL 66 66 74
VALDESE 28690 704 874-3160
U OF NC

SUH, SANG HYON GS AC
P. O. BOX 266 56 56 75
MORGANTON 28655 704 433-2235
YONSEI U

INTERNAL MEDICINE

ABERNATHY, DAVID SMITH IM /IM AC
341 E. PARKER ROAD 80 81 84
MORGANTON 28655 704 433-0225
DUKE

12. BURKE COMPONENT SOCIETY (Continued)

OLLETT, JAMES ROUNTREE IM /CD L/RT 44 44 47
312 W. UNION ST.
MORGANTON 28655 704 437-2712
HARVARD

ARROU, BENJAMIN WESLEY, SR. IM AC 61 61 67
560 MALCOLM BLVD.
RUTHERFORD COLLEGE 28671 704 874-0522
U OF NC

EE, CHOO HYUNG IM /HEM AC 48 48 73
BROUGHTON HOSPITAL
MORGANTON 28655 704 433-2501
YONSEI U

ICGIMSEY, JAMES FRANKS, JR. IM /P L 43 46 53
WESTERN CAROLINA CENTER
ENOLA ROAD
MORGANTON 28655 704 433-2744
HARVARD

EDDY, SREENIVAS MADDURI IM /ON AC 75 75 85
PO BOX 727
RUTHERFORD COLLEGE 28671 704 874-2921
OSMANIA MED COLL

HAH-KHAN, SARDAR MAHMOOD IM /CD AC 61 61 71
303 COLLEGE STREET
MORGANTON 28655 704 437-4261
OSMANIA MED COLL

TUTESMAN, MICHAEL STEVEN IM C 79 80 90
341 E. PARKER RD.
MORGANTON 28655 704 433-0225
BAYLOR

EUROLOGY

)MER, SYED N /IM AC 50 52 74
BROUGHTON HOSPITAL
MORGANTON 28655 704 433-2284
OSMANIA MED COLL

BSTETRICS AND GYNECOLOGY

ELLISON, CARROL WENDELL OBG AC 68 69 76
500 E. PARKER ROAD
MORGANTON 28655 704 433-5700
MED COLL OF GA

HAMER, ALFRED WILSON, JR. OBG AC 58 58 65
103 MEDICAL HEIGHTS DR.
MORGANTON 28655 704 437-6122
U OF NC

LAFFERTY, JOHN MORRISON OBG AC 79 80 76
PO BOX 597
RUTHERFORD COLLEGE 28671 704 874-2251
U OF NC

LINDQUIST, RICHARD KURT OBG AC 59 59 64
2203 S. STERLING ST., STE. 132
MORGANTON 28655 704 437-6122
DUKE

POPE, THOMAS DAVID OBG AC 72 72 80
403 S. KING STREET
MORGANTON 28655 704 433-4661
BAYLOR

WELLBORN, WILLIAM REVERE, JR. OBG L/RT 42 46 56
PO BOX 259
LAKE LURE 28746 704 625-1924
TULANE U

OPHTHALMOLOGY

DAVIS, ANDREW CALVIN OPH AC 79 79 83
335 E. PARKER RD. 704 433-6220
MORGANTON 28655
MED U OF SC

KATH, PHILIP DOUGLAS OPH AC 76 77 81
335 E. PARKER ROAD 704 433-6220
MORGANTON 28655
MAYO MED SCHOOL

ORRISON, WILLIAM GRESHAM OPH AC 69 69 78
335 E. PARKER ROAD 704 433-1000
MORGANTON 28655
U OF TEXAS

RAYNOR, LEIGHTON ALVIN OPH AC 77 79 83
335 E. PARKER RD. 704 433-6220
MORGANTON 28655
U OF NC

SALISBURY, JAMES ARTHUR OPH AC 77 77 89
503 W. UNION ST. 704 433-6220
MORGANTON 28655
TULANE U

WILLIS, LARRY FRANKLIN OPH AC 68 69 77
335 E. PARKER ROAD 704 433-6220
MORGANTON 28655
MED COLL OF GA

ORTHOPEDIC SURGERY

ANDERSON, LARRY GLENN ORS AC 67 71 76
103 MEDICAL HEIGHTS DR. 704 437-6500
MORGANTON 28655
U OF ILLINOIS

GLUGOVER, DONALD BENJAMIN ORS AC 62 62 85
PO BOX 700
DOCTORS CLINIC
VALDESE 28690 704 874-3379
CHICAGO MED SCH

SAUNDERS, ANDREW PETER ORS AC 70 70 90
DOCTORS' CLINIC
VALDESE GENERAL HOSPITAL
VALDESE 28690 704 874-3379
HARVARD

OTOLARYNGOLOGY

HART, ELZIE FRANKLIN, JR. OTO /PS AC 67 67 74
PO DRAWER 340 704 433-6410
MORGANTON 28655
U OF NC

PSYCHIATRY

KILBRIDE, KEVIN ANTHONY P /GP AC 61 62 82
BOX 114, BROUGHTON HOSPITAL 704 433-2476
MORGANTON 28655
NAT U OF IRELAND

MILLER, ALMA ELIZABETH P /IM AC 49 54 72
PO BOX 18
BROUGHTON HOSPITAL
MORGANTON 28655 704 637-2729
MEHARRY MED COLL

RUSS, DONALD BARNARD P AC 76 76 79
RT. #10, BOX 200-H 704 438-6230
MORGANTON 28655
U OF NC

VERNON, JAMES TAYLOR P L/RT 45 45 46
P. O. BOX 1139 704 437-5839
MORGANTON 28655
WASHINGTON U

PEDIATRICS

JARRAH, AZMI SHAFIQ PD /PNP AC 61 61 74
100 MEDICAL HTS. 704 433-4484
MORGANTON 28655
AMER.U OF BEIRUT

THOMAS, JAMES JOSEPH PD AC 56 63 65
100 MEDICAL HEIGHTS DR. 704 433-4484
MORGANTON 28655
U OF ILLINOIS

PATHOLOGY, ANATOMICAL AND CLINICAL

BOWEN, J. HARTLEY, III PTH AC 77 79 83
208 CAMELOT DRIVE 704 438-2254
MORGANTON 28655
JEFFERSON

CROOM, DORWYN WAYNE, II PTH AC 76 79 81
2201 S. STERLING ST. 704 438-2255
MORGANTON 28655
WASHINGTON U

NEALE, RICHARD CARROLL, JR. PTH /CLP AC 59 65 66
P. O. BOX 249 704 879-8767
RUTHERFORD COLLEGE 28671
MED COLL OF VA

RADIOLOGY

ANTLEY, RAY M. R AC 62 62 86
2201 S. STERLING ST. 704 433-1235
MORGANTON 28655
EMORY U

CHURCH, JACK LEE R /IM AC 63 64 71
BROUGHTON HOSPITAL 704 433-2256
MORGANTON 28655
U OF TENNESSEE

HOWERTON, PHILIP THOMAS R AC 58 58 66
201 E. PARKER RD. 704 433-1235
MORGANTON 28655
DUKE

JACUMIN, WALTER JOE R /NM AC 66 66 72
PO BOX 265 704 879-9541
RUTHERFORD COLLEGE 28671
MED COLL OF VA

THERAPEUTIC RADIOLOGY

WHITE, EMMETT ROYCE TR /R AC 54 54 61
BOX 10 704 879-9541
RUTHERFORD COLLEGE 28671
BOWMAN GRAY

UROLOGICAL SURGERY

SPIGGLE, JOHN ALEXANDER U AC 69 69 77
500 E. PARKER ROAD 704 433-5141
MORGANTON 28655
U OF TENNESSEE

WILSON, LAWRENCE STEVEN U AC 77 78 84
VALDESE DOCTORS' CLINIC
P. O. BOX 700
VALDESE 28690 704 874-4890
SUNY-SYRACUSE

13. CABARRUS COMPONENT SOCIETY

OFFICERS—**President:** David W. McMurry, M.D., 130 Lake Concord Rd., N.E., Concord 28025 (704 782-3114)
Secretary: Ronald S. Gable, M.D., 33 Lake Concord Rd., N.E., Concord 28025 (704 786-2015)

NESTHESIOLOGY

BEACH, LAURIE JEANNE AN AC 84 85 89
920 CHURCH ST. N. 704 786-2111
CONCORD 28025
U OF TENNESSEE

CHEKAN, GEORGE, JR. AN AC 80 80 90
920 CHURCH ST., NORTH 704 786-2111
CONCORD 28025
U OF MARYLAND

COTTRELL, WILLIAM MILNES AN AC 75 78 79
84 LAKE CONCORD RD. NE #F 704 786-2111
CONCORD 28025
EMORY U

13. CABARRUS COMPONENT SOCIETY (Continued)

ANATOMIC PATHOLOGY

CARROLL, CHARLES FISHER, JR. ATP AC
53 56 59
CABARRUS MEMORIAL HOSPITAL
CONCORD 28025 704 788-5987
U OF MARYLAND

CARDIOVASCULAR DISEASES

TRAHEY, THOMAS F., III CD AC
84 86 89
920 CHURCH STREET NORTH
CABARRUS MEM. HOSPITAL
CONCORD 28025 704 788-5939
BOWMAN GRAY

WHITAKER, DONALD NASH, JR. CD /IM AC
75 75 81
140 LECLINE DRIVE, NE
CONCORD 28025 704 788-3367
BOWMAN GRAY

DIAGNOSTIC RADIOLOGY

BLUM, JEFFREY CLARK DR /IM AC
73 77 80
651 CHURCH ST., NORTH
CONCORD 28025 704 786-0214
U OF MARYLAND

GALLAGHER, KATHLEEN A. DR AC
76 76 84
651 CHURCH ST., NORTH
CONCORD 28025 704 786-0214
U OF NC

GERDES, JOSEPH JOHN DR AC
70 71 76
2701 LANDING VIEW LN.
CHARLOTTE 28226 704 786-0214
GEORGETOWN U

OTTENI, GERALD VINCENT DR AC
70 70 76
123 OVERBROOK DRIVE
CONCORD 28025 704 786-2111
U OF VIRGINIA

RILEY, DAVID LINDLEY DR AC
73 74 80
651 CHURCH ST., N.
CONCORD 28025 704 786-0214
MED COLL OF VA

EMERGENCY MEDICINE

MILLER, HAROLD MELTON EM /FP AC
72 73 85
4367 WEDDINGTON RD.
CONCORD 28025 704 786-2111
U OF CA-IRVINE

FAMILY PRACTICE

BARRINGER, ARCHIBALD LIPE FP L/RT
36 37 44
BOX 278
MOUNT PLEASANT 28124 704 436-9151
TEMPLE U

DOBSON, LOLO ALLEN, JR. FP AC
80 81 82
115 COOK ST.
PO BOX 1058
MT. PLEASANT 28124 704 436-6521
BOWMAN GRAY

MOORE, JACK CLARK, II FP AC
87 89 90
888 N. CHURCH ST.
CONCORD 28025 704 786-3122
WEST VA U

RHODES, CHARLES WINSTON W. FP AC
80 81 80
PO BOX 1058
MOUNT PLEASANT 28124 704 436-6521
BOWMAN GRAY

TUTTLE, JOHN CLOYD FP AC
83 84 89
117 S. MAIN ST.
KANNAPOLIS 28081 704 932-7016
BOWMAN GRAY

TUTTLE, MARLER SLATE, SR. FP L
38 38 40
117 S. MAIN STREET
KANNAPOLIS 28081 704 932-7016
TEMPLE U

ZELLNER, ERIC EUGENE FP /EM AC
74 74 80
103 COUNTRY CLUB DR.
CONCORD 28025 704 788-1140
PENN STATE U

GASTROENTEROLOGY

LONG, THOMAS THERON, III GE /IM AC
66 66 75
920 N. CHURCH STREET
CONCORD 28025 704 788-4186
BOWMAN GRAY

PANCOTTO, FRANK SALVATORE GE AC
75 76 81
920 N. CHURCH ST.
CONCORD 28025 704 788-4186
CHICAGO MED SCH

GENERAL PRACTICE

CORRELL, EARL EUGENE GP AC
46 47 51
KANNAPOLIS MEDICAL CLINIC
KANNAPOLIS 28081 704 933-2101
U OF TENNESSEE

CRAVEN, FREDERICK THORNS GP L/RT
38 38 40
P. O. BOX 185
CONCORD 28025 704 782-2710
NEW YORK U

RITCHIE, HENRY JACKSON GP AC
57 57 65
823 DAVIDSON DR. NW
CONCORD 28025 704 786-3181
U OF NC

GENERAL SURGERY

CHALFANT, WILLIAM PAXSON GS /CDS AC
66 66 73
56 LAKE CONCORD ROAD, N.E.
CONCORD 28025 704 786-1104
GEO WASHINGTON U

CROOK, JAMES LESTER GS C
67 67 91
56 LAKE CONCORD RD., NE.
CONCORD 28025 704 786-1104
BAYLOR

CROOK, JOHN NEWMAN GS /VS AC
66 66 74
56 LAKE CONCORD ROAD
CONCORD 28025 704 786-1104
DUKE

FLOWE, BENJAMIN HUGH GS /TS AC
49 50 58
56 LAKE CONCORD ROAD, N.E.
CONCORD 28025 704 786-1105
DUKE

MORRIS, RAE HENDERSON GS L/RT
29 29 32
111 LOUISE DRIVE, S.E.
CONCORD 28025 704 782-4918
JEFFERSON

GYNECOLOGY

AREY, JOHN VINCENT GYN L/RT
46 46 51
246 UNION ST. N.
CONCORD 28025 704 788-4151
HARVARD

JONES, CLAYTON JOE GYN AC
52 58 59
107 COUNTRY CLUB DRIVE
CONCORD 28025 704 786-7158
U OF TENNESSEE

INTERNAL MEDICINE

COOKE, JAMES HARBIN, JR. IM AC
76 79 81
130 LAKE CONCORD RD.
CONCORD 28025 704 782-3114
DUKE

ERNST, HENRY EDWIN IM L/RT
43 47 48
167 INGLESIDE DRIVE, S.E.
CONCORD 28025 704 782-0960
MED COLL OF VA

FORTNEY, SIDNEY RAY IM /END AC
63 63 70
68 LAKE CONCORD ROAD, N.E.
CONCORD 28025 704 782-3135
DUKE

GELLER, DAVID MICHAEL IM /GER AC
80 81 90
390 COPPERFIELD BLVD.
CONCORD 28025 704 782-5782
TEMPLE U

HAMRICK, LADD WATTS, JR. IM /NM AC
46 46 4
390 COPPERFIELD BLVD.
CONCORD 28025 704 782-313
BOWMAN GRAY

HAWKINS, BARRY FUGH IM L/R
44 51 5
PO BOX 2958
CONCORD 28025 704 782-110
U OF VIRGINIA

KEEL, JAMES FRANKLIN, III IM /CCM AC
74 78 7
68 LAKE CONCORD ROAD, N.E.
CONCORD 28025 704 782-313
DUKE

KEIPPER, VINCENT LEE MCCALLA IM /GER AC
73 77 7
56 ARDSLEY AVENUE, N. E.
CONCORD 28025 704 782-1101
VANDERBILT U

KELLING, DOUGLAS GEORGE, JR. IM /PUD AC
72 74 7
390 COPPERFIELD BLVD.
CONCORD 28025 704 782-313
HARVARD

KNEEDLER, WILLIAM HARDING IM L
26 30 47
THE PINES #142
DAVIDSON 28036 704 896-1142
U OF PENN

MALONE, JOHN HUGH, JR. IM AC
60 60 67
56 ARDSLEY AVENUE, N.E.
CONCORD 28025 704 782-1101
DUKE

MCMURRY, DAVID WILLIS IM AC
82 83 80
130 LAKE CONCORD ROAD
CONCORD 28025 704 782-3114
U OF NC

MCWHORTER, ROBERT LIGON IM AC
47 47 54
390 COPPERFIELD BLVD.
CONCORD 28025 704 782-3135
DUKE

MONROE, GEORGE CLARKE, III IM AC
75 75 79
470 LAKE CONCORD RD.
CONCORD 28025 704 786-7122
BAYLOR

SUMNER, ROBERT GRIST IM /CD AC
59 65 66
68 LAKE CONCORD ROAD, N.E.
CONCORD 28025 704 782-3135
CORNELL U

SURRATT, ROBERT WALTER IM AC
78 79 81
56 ARDSLEY AVENUE, N.E.
CONCORD 28025 704 782-1101
U OF NC

OBSTETRICS AND GYNECOLOGY

CROSLAND, DAVID BAILEY OBG AC
58 58 64
1054 BURRAGE ROAD, N. E.
CONCORD 28025 704 788-4151
U OF NC

FURR, CARL AUGUSTUS, JR. OBG AC
58 58 66
1054 BURRAGE ROAD, N. E.
CONCORD 28025 704 788-4151
U OF NC

JENKINS, WANDA LOUISE OBG AC
79 83 83
211 LEPHILLIP COURT
CONCORD 28025 704 786-1115
U OF CINCINNATI

LONG, FRANK EDWARD OBG AC
75 75 79
1054 BURRAGE ROAD, N. E.
CONCORD 28025 704 788-4151
U OF MARYLAND

MONROE, LANCE TRUMAN OBG /OBS L
32 36 38
476 CAMROSE CIRCLE, NE
CONCORD 28025 704 782-3717
NEW YORK U

MOON, JAMES PATRICK OBG AC
79 81 87
1054 BURRAGE RD. NE
CONCORD 28025 704 788-4151
U OF SOU. DAKOTA

PRESTA-CARNES, MARLA MARIE OBG AC
82 83 88
211 LE PHILLIP CT., NE
CONCORD 28025 704 786-1115
U OF CHICAGO

13. CABARRUS COMPONENT SOCIETY (Continued)

CCUPATIONAL MEDICINE

ST. CLAIR, STEVEN H. OM /ADM AC 87 88 87
84 LAKE CONCORD RD. NE #C
CONCORD 28025 919 490-6202
COLUMBIA U

PHTHALMOLOGY

BOBBITT, JAMES DANIEL OPH AC 69 74 77
33 LAKE CONCORD ROAD, N.E.
CONCORD 28025 704 786-2015
WEST VA U

BURCHFIELD, WILLIAM JOHN OPH AC 67 67 73
500 LAKE CONCORD RD., NE
CONCORD 28025 704 782-1127
U OF MICHIGAN

GABLE, RONALD SELMAN OPH AC 65 65 80
33 LAKE CONCORD ROAD, N.E.
CONCORD 28025 704 786-2015
MED COLL OF GA

HARPER, DAVID KEITH OPH AC 81 81 85
500 LAKE CONCORD RD., NE
CONCORD 28025 704 782-1127
U OF NC

RANKIN, RICHARD BRANDON, JR. OPH AC 53 53 56
500 LAKE CONCORD RD., NE
CONCORD 28025 704 782-1127
DUKE

WHEATLEY, JAMES WALTER OPH AC 76 76 80
500 LAKE CONCORD RD., NE
CONCORD 28025 704 782-1127
U OF MARYLAND

RTHOPEDIC SURGERY

BEAVER, ROBERT HOWELL ORS AC 73 73 83
109 COUNTRY CLUB DR.
CONCORD 28025 704 786-5122
U OF TENNESSEE

BURKE, DAVID JOSEPH ORS AC 67 68 75
528 LAKE CONCORD ROAD, N. E.
PO BOX 1606
CONCORD 28025 704 788-3155
U OF IOWA

JASMINE, MARK S. ORS AC 82 84 86
PO BOX 1606
CONCORD 28026 704 788-3155
HARVARD

LOFTUS, JAMES MORGAN, JR. ORS AC 74 79 79
PO BOX 1606
CONCORD 28026 704 788-3155
GEORGETOWN U

SELLERS, FRANK BARKLEY ORS AC 59 59 66
PO BOX 1606
CONCORD 27026 704 788-3155
BOWMAN GRAY

SIKES, THOMAS EDWARD, JR. ORS AC 70 71 77
109 COUNTRY CLUB DR., NE
CONCORD 28025 704 786-5122
MED COLL OF GA

WASSEL, JOHN JOSEPH ORS AC 74 81 82
PO BOX 1606
CONCORD 28026 704 788-3155
GEORGETOWN U

OTOLARYNGOLOGY

BROWN, JAMES WALTER, JR. OTO /HNS L/RT 41 49 52
633 GRANDVIEW DR., NE
CONCORD 28025 704 782-8316
DUKE

CHIKES, PETER GEORGE OTO AC 72 72 74
34 ARDSLEY AVE., NE
CONCORD 28025 704 782-2166
U OF NC

HAMMONDS, ROBERT EUGENE OTO /PS AC 58 61 66
113 COUNTRY CLUB DR.
CONCORD 28025 704 788-2154
MED COLL OF GA

HUGHES, LYNN ALLEN OTO AC 68 71 73
11 ARDSLEY AVE.
CONCORD 28025 704 788-1103
U OF OKLAHOMA

QUINN, ROBERT P. OTO /HNS AC 80 86 87
25 LAKE CONCORD RD.
CONCORD 28025 704 782-6673
OHIO STATE U

PEDIATRICS

BAKER, LINNY MARSHALL PD /A AC 60 60 64
40 ARDSLEY AVENUE, N.E.
CONCORD 28025 704 782-1918
DUKE

BENBOW, JOHN MILLER PD AC 73 75 76
40 ARDSLEY AVENUE, N.E.
CONCORD 28025 704 786-1144
DUKE

ENGSTROM, GEORGE ALFRED PD AC 59 59 66
40 ARDSLEY AVENUE, N.E.
CONCORD 28025 704 786-1145
DUKE

LOCKHART, DAVID ARMISTEAD PD AC 51 53 54
40 ARDSLEY AVENUE, N.E.
CONCORD 28025 704 786-1144
DUKE

ANATOMICAL AND CLINICAL PATHOLOGY

KINNEY, ROBERT BRUCE PTH AC 81 85 79
1419 DENNBRIAR DR.
CONCORD 28025 704 788-5987
DUKE

REEVES, WILLIAM JOHN PTH AC 58 58 65
CABARRUS MEM. HOSP.
CONCORD 28025 704 786-2111
BOWMAN GRAY

YAP, ELSA DUMAUG PTH AC 63 74 76
CABARRUS MEMORIAL HOSPITAL
CONCORD 28025 704 788-5987
CEBU INST OF MED

RADIOLOGY

ROSSER, GEORGE THOMAS R AC 62 66 67
1925 TRILLIUM LANE
CHARLOTTE 28211 704 786-0214
U OF TENNESSEE

UROLOGICAL SURGERY

HENRY, HECTOR HIMEL, II U /PD AC 65 65 70
102 LAKE CONCORD ROAD, N.E.
CONCORD 28025 704 786-5133
TULANE U

NORDAN, JOHN MCLEAN U AC 69 69 76
102 LAKE CONCORD ROAD, N.E.
CONCORD 28025 704 786-5131
BOWMAN GRAY

TOMLIN, EDWIN MERRILL U AC 46 56 57
102 LAKE CONCORD ROAD, N.E.
CONCORD 28025 704 786-5131
U OF TENNESSEE

14. CALDWELL COMPONENT SOCIETY

OFFICERS—**President:** N. Maxville Lewis, Jr., M.D., 912 Connelly Springs Rd., Lenoir 28645 (704 758-8224)
Secretary: Edwin G. Farrell, M.D., 226-H Morganton Blvd., Lenoir 28645 (704 758-5111)

IAGNOSTIC RADIOLOGY

DILL, DAVID LEE DR AC 72 73 77
203 CEDAR ROCK EST. DR.
LENOIR 28645 704 754-2283
MED COLL OF GA

GRAYBEAL, FRANK R., JR. DR AC 77 78 88
PO BOX 659
LENOIR 28645 704 754-2283
MED U OF SC

NEWMAN, ROBERT HENRY DR AC 76 76 81
PO BOX 659
LENOIR 28645 704 754-2283
INDIANA U

FAMILY PRACTICE

BOWEN, JOHN HENRY FP /GP AC 80 82 84
912 CONNELLY SPRINGS ROAD
P. O. BOX 1014
LENOIR 28645 704 728-8224
U OF NC

CARSWELL, JANE TRIPLETT FP AC 58 61 61
P. O. BOX 960
LENOIR 28645 704 754-0541
MED COLL OF VA

CRUTCHER, KENNETH L. FP /EM AC 84 85 87
RT. #1, BOX 134-B
HUDSON 28638 919 728-2019
DUKE

GUERRA, MARC FRANCIS FP AC 80 80 85
912 CONNELLY SPRINGS RD.
LENOIR 28645 704 728-8224
ST U OF NY-BUFF

HERMAN, DENNICE HICKMAN FP AC 86 86 83
401 MULBERRY ST., STE. 200
LENOIR 28645 704 754-0707
EAST CAROLINA U

LEWIS, N. MAXVILLE, JR. FP AC 84 85 89
912 CONNELLY SPRINGS RD.
LENOIR 28645 704 728-8224
EAST CAROLINA U

MORGAN, NANCY ELAINE FP AC 79 81 84
401 MULBERRY ST., SW, STE. 200
LENOIR 28645 704 754-0707
OHIO STATE U

SCHEIL, CHARLES PHILIP FP AC 58 58 64
P. O. BOX 960
LENOIR 28645 704 754-0541
DUKE

GENERAL PRACTICE

CARPENTER,KENNETH C. GP AC 47 48 50
P. O. BOX 699
LENOIR 28645 704 754-7861
BOWMAN GRAY

MOSS, PAUL N. GP AC 54 54 55
C-29-6,167 HUNTINGTON DR.
HUDSON 28638 704 728-3943
BOWMAN GRAY

TILLEY, PAUL DONALD GP AC 59 59 64
P. O. BOX 5607
LENOIR 28645 704 758-2368
BOWMAN GRAY

TROUTMAN, BAXTER SUTTLES GP L/RT 36 36 39
521 MT. VIEW ST., SW
LENOIR 28645
U OF MARYLAND

14. CALDWELL COMPONENT SOCIETY (Continued)

GENERAL SURGERY

HANCOCK, GEORGE MARVIN GS AC
61 61 76
PO BOX 1648
LENOIR 28645 704 758-5501
VANDERBILT U

LORE, RALPH ELI GS L/RT
33 33 37
306 PENNTON AVENUE, S.W.
LENOIR 28645 704 754-7356
RUSH MED COLL

RIPLEY, ROBERT CAMERON GS AC
79 84 89
PO BOX 1648
401 MULBERRY ST.
LENOIR 28645 704 758-5501
MED COLL OF VA

ROACH, ROBERT BURCHELL GS L
43 43 51
PO BOX 1648
LENOIR 28645 704 758-5501
TEMPLE U

SHULL, LONNIE NEWELL, JR. GS AC
69 69 76
PO BOX 1648
LENOIR 28645 704 758-5501
MED U OF SC

INTERNAL MEDICINE

BELK, ROBERT SAMUEL IM /CD AC
69 69 73
322 MULBERRY ST. SW
PO BOX 1020
LENOIR 28645 704 758-5544
MED U OF SC

LUTZ, CHARLES LARRY IM /GE AC
70 70 74
P. O. BOX 1020
LENOIR 28645 704 758-5544
TULANE U

MAULL, JOHN M. IM AC
81 81 87
3 ALUMNI DR., STE. 203
EXETER, NH 03833 704 758-5544
EMORY U

METZGER, GEORGE ANDREW IM /NEP AC
72 74 78
322 MULBERRY ST., SW
PO BOX 1020
LENOIR 28645 704 758-5544
U OF MARYLAND

STALHEIM, RODNEY MARTIN IM /CD AC
71 72 80
322 MULBERRY ST., SW
PO BOX 1020
LENOIR 28645 704 758-5544
MED U OF SC

THOMPSON, FREDERICK A. IM /CD L/RT
46 47 52
505 HIGHLAND AVE. SW
LENOIR 28645 704 758-5544
DUKE

THOMPSON, OTIS RICHARD, JR. IM /CD AC
53 53 57
322 MULBERRY ST., SW
PO BOX 1020
LENOIR 28645 704 758-5544
BOWMAN GRAY

WALTON, CAREY JAMES, JR. IM /GE L/RT
55 55 59
P. O. BOX 1020
322 MULBERRY ST., SW
LENOIR 28645 704 758-5544
BOWMAN GRAY

OBSTETRICS AND GYNECOLOGY

GRIFFIN, JOSEPH LAIRD OBG AC
72 73 80
P. O. BOX 2640
LENOIR 28645 704 758-2300
MED COLL OF GA

ROGERS, ROBERT LEE, JR OBG AC
57 63 64
P. O. BOX 2640
LENOIR 28645 704 758-2309
MED COLL OF GA

OCCUPATIONAL MEDICINE

WALLACE, RAYMOND D., JR. OM AC
56 56 74
PO BOX 609
109 FAIRWAY AVE.
HUDSON 28638 704 728-8261
MED COLL OF VA

OPHTHALMOLOGY

TYE, JOHN GAROLD OPH AC
79 80 85
659 PENNTON AVE.
LENOIR 28645 704 754-0561
U OF CINCINNATI

ORTHOPEDIC SURGERY

MCCORMICK, JOHN THOMAS ORS AC
74 75 80
401 MULBERRY ST. SW. STE. 103
LENOIR 28645 704 758-7091
EMORY U

OTOLARYNGOLOGY

DARSIE, JAMES LEIGH OTO AC
66 66 79
MULBERRY MEDICAL PARK
LENOIR 28645 704 754-2464
BAYLOR

PEDIATRICS

FARRELL, EDWIN GAYLE PD /ADL AC
71 71 90
226-H MORGANTON BLVD.
PO BOX 1258
LENOIR 28645 704 758-5111
U OF NC

FOUNTAIN, MARTHA TOY PD AC
81 81 89
FOOTHILLS PEDIATRICS
226-H MORGANTON BLVD.
LENOIR 28645 704 758-5111
EMORY U

HICKMAN, HARRY STUART PD L
38 40 42
426 NORWOOD ST. SW
LENOIR 28645 704 728-8484
DUKE

TABLER, JAN BISHOP PD AC
78 78 90
PO BOX 1258
LENOIR 28645 704 758-5111
U OF PENN

ZEMP, CHARLES H., JR. PD AC
49 65 65
NAUCARE-2, 2070 NORTHBROOK
NORTHBROOK CTR., STE. A20
N. CHARLESTON, SC 29418
MED U OF SC

ANATOMICAL AND CLINICAL PATHOLOGY

MCNEILL, DONALD DRAKE, JR. PTH /CLP AC
65 65 72
P. O. DRAWER 680
LENOIR 28645 704 754-7063
U OF NC

WOODHOUSE, SHERRY L. PTH AC
80 81 88
PO DRAWER 680
LENOIR 28645 704 758-2114
U OF IOWA

RADIOLOGY

CURTIS, RICHARD FRANKLIN R /NM AC
67 67 83
PO BOX 659
LENOIR 28645 704 757-5205
MED U OF SC

WHIDDON, SCOTT M. R AC
78 82 00
PO BOX 659
LENOIR RADIOLOGY ASSOCS., PA
LENOIR 28645 704 754-2283
U OF MIAMI

UROLOGICAL SURGERY

SNOW, SIDNEY LEWIS U AC
63 78 79
328 MULBERRY STREET, S.W.
LENOIR 28645 704 754-2166
U OF OTTAWA

16. CARTERET COMPONENT SOCIETY

OFFICERS—**President:** W. Stanley Rule, M.D., 3601-H Bridges St., Morehead City 28557 (919 240-4537)
Secretary: William Grimsley, M.D., Cateret General Hospital, Morehead City 28557 (919 247-1616)

CARDIOVASCULAR DISEASES

PURUSHOTHAMAN, CHANDROTH V. CD /IM AC
65 67 84
#4 MEDICAL PARK
MOREHEAD CITY 28557 919 247-5426
CALICUT U

EMERGENCY MEDICINE

FERRY, SENECA TAYLOR, II EM /FP AC
65 65 78
P. O. BOX 8
SMYRNA 28579 919 729-7831
U OF MISSOURI

FAMILY PRACTICE

BRADY, WALTER MORRIS FP AC
51 52 53
#5 MEDICAL PARK
MOREHEAD CITY 28557 919 726-8414
MED COLL OF VA

DIECKMANN, MERWIN R. FP AC
54 55 83
209-B MCLEAN DR.
SWANSBORO 28584 919 393-6543
U OF IOWA

GENERAL PRACTICE

AQUADRO, CHARLES FRASURE GP /OM AC
52 52 71
326 FRONT STREET
BEAUFORT 28516 919 728-5141
U OF TENNESSEE

GAINEY, JOHN WHITE, JR. GP AC
55 55 57
P. O. DRAWER 97
MOREHEAD CITY 28557 919 726-3406
U OF NC

HARKER, MARGARET NELSEN GP AC
68 69 74
P. O. DRAWER 897
MOREHEAD CITY 28557 919 247-3476
GEO WASHINGTON U

GENERAL SURGERY

WAY, BRADY COLE GS AC
76 76 85
3 MEDICAL PARK
MOREHEAD CITY 28557 919 726-1136
BOWMAN GRAY

WAY, JOHN EDWARD GS L
38 38 47
#3 MEDICAL PARK
MOREHEAD CITY 28557 919 726-1136
U OF MARYLAND

YURKO, JOHN EVANS GS AC
63 63 71
15 MEDICAL PARK
MOREHEAD CITY 28557 919 247-2101
MED COLL OF VA

INTERNAL MEDICINE

WALKER, WILLIAM THOMAS, JR. IM AC
79 79 83
#9 MEDICAL PARK
MOREHEAD CITY 28557 919 726-9091
JOHNS HOPKINS

16. CARTERET COMPONENT SOCIETY (Continued)

OBSTETRICS AND GYNECOLOGY

FALLS, DARRYL LEE — OBG AC 80 80 84
16 MEDICAL PARK
MOREHEAD CITY 28557
U OF NC
919 726-0107

MORRISON, LEON MACMILLAN — OBG AC 75 76 80
16 MEDICAL PARK
MOREHEAD CITY 28557
U OF FLORIDA
919 247-4297

OLIVER, GEORGE MOTLEY, JR. — OBG AC 70 71 77
6 MEDICAL PARK
MOREHEAD CITY 28557
U OF NC
919 726-8016

TEETER, ROBERT TENNANT — OBG AC 74 74 78
192474297
MOREHEAD CITY 28557
U OF NC
919 726-0107

OPHTHALMOLOGY

MAJSTORAVICH, JOSEPH, JR. — OPH AC 74 74 79
P. O. BOX 1317
MOREHEAD CITY 28557
U OF NC
919 726-0411

ORTHOPEDIC SURGERY

MOORE, JEFFREY KEVIN — ORS AC 83 84 90
15 MEDICAL PARK
MOREHEAD CITY 28557
U OF MARYLAND
919 247-2101

ZETTL, MATTHEW LEE — ORS AC 75 75 81
15 MEDICAL PARK
MOREHEAD CITY 28557
TULANE U
919 247-2101

THORACIC SURGERY

WRAY, RICHARD HENRY, III — TS /GS AC 68 68 76
15 MEDICAL PARK
MOREHEAD CITY 28557
U OF NC
919 247-2101

UROLOGICAL SURGERY

GARRISON, ROBERT WALTER — U AC 76 77 82
15 MEDICAL PARK
MOREHEAD CITY 28557
CASE WESTERN RES
919 247-2101

18. CATAWBA COMPONENT SOCIETY

OFFICERS—**President:** Alan G. Forshey, M.D., 105-B S. Main Ave., Newton 28658 (704 465-3928)
Secretary: Thomas E. Goodin, M.D., 701 5th Ave., N.E., Conover 28613 (704 322-0870)
Executive Secretary: Margaret D. Lawing, 617 Gabriel Ave., Newton 28658 (704 464-2505)

NO SPECIALTY LISTED

FRIEDMAN, EDNA CHARNEY — L 39 39 57
5161 COLLINS AVE., APT. 412
MIAMI BEACH, FL 33140
U OF ZURICH
305 864-2880

ALLERGY & IMMUNOLOGY

INGLEFIELD, JOSEPH T., III — AI /PDA AC 82 84 89
RT. #3, BOX 330
HICKORY 28602
MED COLL OF VA
704 465-7248

ANESTHESIOLOGY

MURRAY, ROBERT FULTON, III — AN AC 85 89 90
415 N. CENTER ST., STE. 103
HICKORY 28601
U OF NC
704 327-8105

OBSTETRICS AND GYNECOLOGY

GOODIN, THOMAS ELLIOTT,III — AN AC 66 67 67
701 5TH AVE., NE
CONOVER 28613
U OF TENNESSEE
704 322-0870

MURRAY, ROBERT FULTON, III — AN AC 85 89 90
415 N. CENTER ST., STE. 103
HICKORY 28601
U OF NC
704 327-8105

OBERLIN, DELOY CHARLES — AN /EM AC 76 78 81
ROUTE #3, BOX 690
NEWTON 28658
STANFORD U
704 322-6070

ROBERTSON, KENT ALAN — AN /IM AC 76 76 85
415 N. CENTER ST. STE. 103
HICKORY 28601
LA STATE U
704 327-8105

STEVENS, ROBERT BRUCE — AN AC 78 83 86
3430 5TH ST. DRIVE, NW
HICKORY 28601
U OF CINCINNATI
704 327-7443

WILLIAMS, LARRY THOMAS — AN AC 79 81 86
PO BOX 1362
HICKORY 28603
U OF NC
704 322-0870

CARDIOVASCULAR DISEASES

HEARON, BRIAN PAUL — CD /IM AC 77 77 85
230 18TH ST. CIRCLE SE
HICKORY 28602
U OF MISSISSIPPI
704 324-4804

MCDONALD, RALPH N. — CD /IM AC 82 83 88
230 18TH ST., CIR. SE
HICKORY 28601
WEST VA U
704 324-4804

STEG, BRIAN DAVID — CD /CD AC 78 79 86
230 18TH ST. CIRCLE SE
HICKORY 28602
CASE WESTERN RES
704 324-4804

CARDIOVASCULAR SURGERY

CARLTON, RICHARD ALAN — CDS AC 81 81 90
420 N. CENTER ST.
HICKORY 28601
U OF MASS
704 323-1100

CHILD PSYCHIATRY

BRANYON, DAVID WATTERSON — CHP /P AC 75 75 90
PO BOX 9149
HICKORY 28603
U OF ALABAMA
704 327-7888

DERMATOLOGY

PRUITT, JERRY L. — D AC 71 71 76
220 18TH ST. CIRCLE SE
HICKORY 28602
BOWMAN GRAY
704 328-6185

TART, DAVID E. — D /IM AC 74 74 79
220 18TH ST. CIR., SE.
HICKORY 28602
U OF NC
704 328-6185

DIAGNOSTIC RADIOLOGY

BOOKER, JOHN PARKS, JR. — DR AC 67 67 74
P. O. BOX 308
HICKORY 28603
MED U OF SC
704 322-2644

BOOLS, JOHN C. — DR /NM AC 80 81 87
18 13TH AVE. NE
PO BOX 308
HICKORY 28603
MED COLL OF OHIO
704 322-2871

FRANKEL, NICHOLAS — DR /NR AC 75 77 87
BOX 308
HICKORY 28603
MED COLL OF VA
704 322-2644

MULL, RICHARD T. — DR AC 81 82 89
920 TATE BLVD., SE., STE. 112
PIEDMONT MEDICAL IMAGING
HICKORY 28602
MED COLL OF GA
704 327-6342

THORWARTH, WILLIAM T.,JR. — DR /NM AC 75 76 84
CATAWBA RADIOLOGICAL ASSOC.
P. O. BOX 308
HICKORY 28603
DARTMOUTH U
704 322-2871

EMERGENCY MEDICINE

HUGGINS, HENRY L., JR. — EM AC 84 85 83
550 11TH AVE. PL. NW
HICKORY 28601
EAST CAROLINA U
704 322-0850

WILLIAMSON, STEVEN G. — EM AC 86 87 87
810 FAIRGROVE CHURCH RD.
HICKORY 28601
U OF ILLINOIS
704 322-0850

FAMILY PRACTICE

ABERNETHY, HENRY WALTER — FP /IM AC 55 55 60
221 13TH AVE. PL. NW-FP
HICKORY 28601
U OF NC
704 322-5800

BOYLES, WAYNE FRANCIS — FP AC 52 52 54
ROUTE #3, BOX 155
HICKORY 28602
WASHINGTON U
704 327-4745

CHI, HONG YUP — FP AC 66 66 71
105 N. MAIN AVENUE
NEWTON 28658
MED COLL OF VA
704 464-5424

CLARKE, WILLIAM LOWE, JR — FP L/RT 41 47 48
551 THIRD ST. NE
HICKORY 28601
EMORY U
704 327-4441

†CLONINGER, CHARLES EDGAR — FP 41 41 43
9674 RIVIERA DR.
DECEASED--11-18-90
SHERRILLS FORD 28673
U OF MARYLAND
704 478 -3155

COLEMAN, LESTER L., JR. — FP L 50 50 52
P. O. BOX 376
HILDEBRAN 28637
BOWMAN GRAY
704 397-3522

DAVIS, JOHN WOODROW — FP L 46 47 50
24 SECOND AVENUE, N. E.
HICKORY 28601
JEFFERSON
704 328-2231

DE LA GARZA, CARLOS A. — FP AC 76 78 85
24 SECOND AVE., NE
HICKORY 28601
U OF COLORADO
704 328-2231

18. CATAWBA COMPONENT SOCIETY (Continued)

EARL, JOHN KEITH FP AC
72 73 77
210 13TH AVE. PLACE, N.W.
HICKORY 28601 704 328-2941
U OF OKLAHOMA

ESPEY, DAN, JR. FP L/RT
47 51 52
434 5TH ST., SE
HICKORY 28601 704 327-0831
U OF LOUISVILLE

FARUQUE, MARK AHMED FP AC
85 86 90
PO BOX 6306
BETHLEHEM STATION
HICKORY 28603 704 495-8226
N E OHIO U

FORSHEY, ALAN GRAY FP AC
78 79 83
105-B SOUTH MAIN
NEWTON 28658 704 465-3928
OHIO STATE U

GOODMAN, BENJAMIN WARREN FP L
51 54 54
24 SECOND AVENUE, N. E.
HICKORY 28601 704 328-2231
U OF TENNESSEE

GUTTLER, SANFORD DENNIS FP AC
76 77 80
1 TRADE STREET
GRANITE FALLS 28630 704 396-3136
TEMPLE U

HARRIS, JEFFREY DAVISON FP AC
77 78 81
HIGHWAY 127 NORTH
P. O. BOX 6050
HICKORY 28603 704 495-8226
U OF CINCINNATI

HART, ROBERT WILLIAM, III FP AC
65 66 67
221 13TH AVENUE PL., NW
HICKORY 28601 704 322-5800
MED U OF SC

HODGES, JAMES ROBINSON FP AC
72 72 79
210 13TH AVENUE PLACE, N.W.
HICKORY 28601 704 328-2941
U OF MICHIGAN

HOFFMAN, SCOTT DAVID FP AC
86 87 89
4654-B HAYGOOD RD.
VIRGINIA BEACH, VA 23455 704 465-3928
M C OF WISCONSIN

HOOVER, DON LEO FP AC
84 84 89
PO BOX 10094
HICKORY 28603 704 294-1116
LSU-SHREVEPORT

ISENHOWER, JOSEPH ANDREW FP AC
54 54 55
24 SECOND AVENUE, N.E.
HICKORY 28601 704 328-2231
BOWMAN GRAY

JAMES, JOHN CLAY FP AC
57 57 62
ROUTE #3, BOX 436
MAIDEN 28650 704 428-9740
BOWMAN GRAY

LEE, ROBERT HAMMILL FP AC
82 85 90
PO BOX 1239
CONOVER 28613 704 464-3821
ST LOUIS U

LEONARD, BAXTER COLUMBUS J. FP AC
72 72 85
24 SECOND AVE., NE
MEDICAL ARTS CLI.
HICKORY 28601 704 328-2231
U OF NC

LEONARD, WALTER EVAN FP AC
53 53 54
130 27TH STREET, S.W.
HICKORY 28602 704 322-1153
BOWMAN GRAY

LEWIS, MICHAEL R. FP AC
72 73 87
PO BOX 629
HUDSON 28638 704 728-4875
JEFFERSON

LONG, WILLIAM EVERETT FP AC
72 72 76
P. O. BOX 1239
CONOVER 28613 704 464-3821
U OF NC

MACLAUCHLIN, WILLIAM THOMPSON FP L/RT
41 41 47
237 8TH ST. NW
CONOVER 28613 704 464-2170
MED U OF SC

MICHAEL, DOUGLAS WORTH FP AC
79 81 84
PO BOX 1239
CONOVER 28613 704 464-3821
JEFFERSON

MIKUS, KEVIN PETER FP AC
82 84 86
PO BOX 1239
CONOVER 28613 704 464-3821
WAYNE STATE U

NIELAND, ROBERT BRUCE FP AC
69 70 76
24 SECOND AVENUE, N. E.
HICKORY 28601 704 328-2231
U OF IOWA

PARKER, BILL JACK FP AC
86 87 89
105-A N. MAIN AVE.
NEWTON 28658 704 465-2200
U OF KENTUCKY

PEELER, FORREST EDWARDS FP AC
50 51 51
ROUTE #3, BOX 436
MAIDEN 28650 704 428-2446
MED COLL OF VA

ROSS, JAMES MILLER FP AC
63 65 65
P. O. BOX 490
CLAREMONT 28610 704 459-7324
U OF TENNESSEE

RUDISILL, ELBERT ANDREW, JR. FP AC
77 77 81
133 FIRST AVE., SE
HICKORY 28602 704 322-5915
BOWMAN GRAY

SEAGLE, LEE MARCUS, JR. FP AC
57 57 61
133 FIRST AVENUE, S.E.
HICKORY 28602 704 322-5915
DUKE

THOMPSON, WILLIAM CECIL, III FP /GER AC
78 79 82
210 13TH AVE. PL., NW
HICKORY 28601 704 322-7170
WEST VA U

WELCH, CARL LESTER FP AC
65 65 68
221 13TH AVE. PL. NW
HICKORY 28601 704 322-5800
MED COLL OF GA

YOUNG, WILLIAM LEE, III FP AC
74 74 79
210 13TH AVENUE PLACE, N.W.
HICKORY 28601 704 328-2941
U OF VIRGINIA

GASTROENTEROLOGY

CALDWELL, LAWRENCE M. II GE /IM AC
71 71 77
P. O. BOX 849
NEWTON 28658 704 464-4550
U OF NC

GENERAL PRACTICE

CUTCHIN, JOSEPH HENRY, JR. GP L
42 43 43
P. O. BOX 67
8303 SHERRILLS FORD RD.
SHERRILLS FORD 28673 704 478-2431
DUKE

GENERAL SURGERY

ANDERSON, RUPERT COTHAM GS C
72 72 90
RT. #2, BOX 196
CONOVER 28613 704 322-8485
U OF ARKANSAS

BRADSHAW, PETER H. GS /VS AC
82 83 87
415 N. CENTER ST., STE. 102
HICKORY 28601 704 327-9178
U OF NC

BYERLY, WESLEY GRIMES, JR. GS AC
52 52 58
24 SECOND AVENUE, N.E.
HICKORY 28601 704 328-4999
HARVARD

CHRISTENSEN, HARVEY EARL GS /TS AC
60 61 72
ROUTE #2, BOX 190
CONOVER 28613 704 322-9105
STANFORD U

COOK, LELAND JAMES GS AC
79 80 85
415 N. CENTER ST., STE. 102
HICKORY 28601 704 327-9178
U OF KENTUCKY

DEATON, HUGO L. GS /TS AC
57 58 64
415 N. CENTER ST., STE. 102
HICKORY 28601 704 327-9178
COLUMBIA U

DICKINSON, MICHAEL WRIGHT GS /CDS AC
75 75 81
415 N. CENTER ST., STE. 102
HICKORY 28601 704 327-9178
U OF VIRGINIA

FAHL, JAMES COX GS AS
48 48 72
24 SECOND AVENUE, N. E.
HICKORY 28601 704 328-2231
HARVARD

FITZGERALD, DWIGHT MELVIN GS /TS AC
69 76 78
ROUTE #2, BOX 196
CONOVER 28613 704 322-8485
U OF ILLINOIS

GARDNER, WILLIAM RONALD GS /VS AC
63 64 73
415 N. CENTER ST., STE. 102
HICKORY 28601 704 327-9178
U OF MIAMI

GASKINS, JAMES A., JR. GS AC
65 65 89
858 SECOND ST., NE, STE 303
HICKORY 28601 704 322-4420
U OF NC

HUGGINS, MICHAEL B. GS /VS AC
81 86 87
RT. #2, BOX 190
CONOVER 28613 704 322-9105
U OF NC

GYNECOLOGY

GACHET, FRED SMITH, JR. GYN AC
57 65 65
1205 N. CENTER STREET
HICKORY 28601 704 328-2901
JOHNS HOPKINS

HAND SURGERY

PEKMAN, WILLIAM MARTIN HS /ORS AC
78 79 85
250 18TH ST. CIRCLE, SE
HICKORY 28602 704 322-5172
U OF CHICAGO

INTERNAL MEDICINE

BLANCHAT, TIMOTHY JOSEPH IM AC
74 74 78
11 13TH AVENUE, N. E.
HICKORY 28601 704 322-3541
WEST VA U

BOONE, EDWARD EVERETT IM AC
71 71 77
ROUTE #2, BOX 199
CONOVER 28613 704 322-1128
BOWMAN GRAY

DENNISON, WM. BRIAN IM /RHU AC
83 83 89
PO BOX 1020
LENOIR 28645 704 758-5544
WEST VA U

DILLON, DANIEL CHRISTIAN IM /GE AC
68 68 75
11 13TH AVENUE, N. E.
HICKORY 28601 704 322-1068
INDIANA U

ENNIS, GEORGE ELLIOTT IM /HEM AC
58 58 65
912 SECOND STREET, N. E.
HICKORY 28601 704 328-2381
U OF NC

FITZ, THOMAS EDMUNDS IM /CD L/RT
50 53 57
2133 9TH ST. NW
HICKORY 28601 704 324-6346
DUKE

GAITHER, JAMES COMER IM AC
61 62 68
ROUTE #2, BOX 199
CONOVER 28613 704 322-1128
WASHINGTON U

HARVEY, DAVID L. IM /NEP AC
83 84 89
1985 TATE BLVD.
750 FIRST PLAZA
HICKORY 28602 704 327-7788
U OF KENTUCKY

LYNN, ARTHUR SIMONTON, JR. IM /CD AC
62 62 68
ROUTE #2, BOX 199
CONOVER 28613 704 322-1128
U OF NC

18. CATAWBA COMPONENT SOCIETY (Continued)

METZGER, GEORGE ANDREW — IM
P. O. BOX 1020 — 72 72 78
322 MULBERRY ST. SW
LENOIR 28645 — 704 758-5544
U OF MARYLAND

SCHNEIDER, INAAM J. — IM AC
PO BOX 1710 — 77 77 88
HICKORY 28603 — 704 328-5566
WAYNE STATE U

SCHNEIDER, RICHARD J. — IM AC
PO BOX 1710 — 76 79 88
HICKORY 28603 — 704 328-5566
WAYNE STATE U

WEISGERBER, DAVID WM. — IM AC
307 10TH AVE. NE — 81 81 88
HICKORY 28601 — 704 327-9898
MED COLL OF OHIO

WISE, JOHN EDNEY — IM AC
1624 N. CENTER STREET — 60 60 67
HICKORY 28601 — 704 328-2094
U OF NC

EUROLOGY

BOYLES, LARRY WAYNE — N /IM AC
MEDICAL SPECIALITIES BLDG. — 70 70 76
415 N. CENTER ST., STE. 202
HICKORY 28601 — 704 327-9869
U OF NC

MARCUS, RICHARD WM. — N AC
600 FIRST PLAZA — 79 79 86
1985 TATE BLVD. SE
HICKORY 28602 — 704 328-5500
U OF TEXAS

MOREWITZ, NANCY D. — N AC
420 N. CENTER ST. — 81 82 87
HICKORY 28601 — 704 327-0553
EASTERN VA

SANTOSO, RUDY ADRIAN — N /P AC
1019 LENOIR RHYNE BLVD. — 71 74 83
HICKORY 28602 — 704 324-4143
PADJADJARAN U

SMITH, ALLEN ORLIN — N AC
415 N. CENTER ST., STE. 202 — 69 69 89
HICKORY 28601 — 704 327-9869
U OF ILLINOIS

EPHROLOGY

QUALHEIM, ROBERT E. — NEP /IM AC
1985 TATE BLVD. — 81 82 88
750 FIRST PLAZA
HICKORY 28602 — 704 327-7788
BOWMAN GRAY

EUROLOGICAL SURGERY

JONES, DAVID MARSHALL — NS AC
415 N. CENTER ST., STE. 203 — 83 88 90
HICKORY 28601 — 704 327-9740
U OF VIRGINIA

MCCLOSKEY, SCOTT MICHAEL — NS AC
415 N. CENTER ST., STE 203 — 75 77 81
HICKORY 28601 — 704 327-9740
U OF MARYLAND

SIMS, WILLIAM LEONARD — NS AC
1985 TATE BLVD. SE, STE. 323 — 79 80 85
HICKORY 28602 — 704 324-9609
U OF KENTUCKY

BSTETRICS AND GYNECOLOGY

BISHOPRIC, ALICE — OBG AC
1205 N. CENTER STREET — 78 79 83
HICKORY 28601 — 704 328-2901
MED U OF SC

CAPOROSSI, PAUL VINCENT — OBG AC
RT. #2, BOX 195 — 65 70 75
CONOVER 28613 — 704 322-4920
MED SCH-UMDNJ

CHATHAM, SCOTT T. — OBG AC
PO DRAWER 38 — 76 76 87
HICKORY 28603 — 704 322-4140
U OF FLORIDA

FARUQUE, LAURA MILLER — OBG AC
419 31ST AVE. CT., NE — 85 85 90
HICKORY 28601 — 704 328-2901
N E OHIO U

HUFFMAN, ALLEN WILLIAM, JR. — OBG AC
1205 N. CENTER STREET — 67 67 76
HICKORY 28601 — 704 328-2901
U OF NC

JORDAN, SCOTT BREWER — OBG AC
RT. #2, BOX 195 — 84 84 90
CONOVER 28613 — 704 322-4920
U OF SOU ALA

LOVIN, VICKIE WEST — OBG AC
RT. #2, BOX 195 — 81 82 86
CONOVER 28613 — 704 322-4920
BOWMAN GRAY

MILLER, JOEL BYRON — OBG AC
P. O. DRAWER 38 — 74 74 80
HICKORY 28603 — 704 322-4140
BOWMAN GRAY

MONTES, ANITA CLAIRE — OBG AC
210 13TH AVE. PL. NW — 81 83 90
HICKORY 28601 — 704 322-3017
U-CA-SAN DIEGO

WARREN, THOMAS LARRY — OBG AC
RT. #2, BOX 195 — 63 63 71
CONOVER 28613 — 704 322-4920
U OF ALABAMA

WOTRING, JAMES WILLIAM, JR. — OBG AC
P. O. BOX 38 — 61 62 68
HICKORY 28603 — 704 322-4140
MED COLL OF VA

ONCOLOGY

ORLOWSKI, RICHARD — ON /HEM AC
225 18TH ST. SE — 78 83 84
P. O. BOX 3710
HICKORY 28603 — 704 324-9550
WASHINGTON U

TATE, MICHAEL NOAH — ON AC
PO BOX 3710 — 82 83 88
HICKORY 28603 — 704 324-9550
U OF NC

OPHTHALMOLOGY

FOSTER, JOHN THOMAS — OPH AC
P. O. BOX 2588 — 62 62 68
HICKORY 28603 — 704 322-2050
DUKE

GRIFFIN, RICHARD MADISON — OPH AC
27 13TH AVENUE, N.E. — 59 60 63
HICKORY 28601 — 704 322-6040
EMORY U

HARRIS, WILLIAM RIX — OPH AC
P. O. BOX 2588 — 56 56 64
HICKORY 28603 — 704 322-2050
U OF NC

JOSLYN, ANN KATHRYN — OPH AC
PO BOX 2588 — 83 86 89
HICKORY 28603 — 704 322-2050
DUKE

KING, WALTER LEE — OPH AC
PO BOX 2186 — 67 67 72
HICKORY 28603 — 704 322-5120
U OF VIRGINIA

LEFLER, WADE HAMPTON, JR. — OPH AC
P. O. BOX 2588 — 63 63 72
HICKORY 28601 — 704 322-2050
BOWMAN GRAY

STEWART, ROY ALLEN — OPH L/RT
P. O. BOX 970 — 40 40 48
NEWTON 28658 — 704 464-1160
EMORY U

WILLIAMS, RANDAL JAMES — OPH AC
P. O. BOX 2588 — 69 69 78
HICKORY 28603 — 704 322-2050
DUKE

ORTHOPEDIC SURGERY

BROWN, PAUL EUGENE — ORS AC
250 18TH ST. CIR. SE — 69 69 75
HICKORY 28602 — 704 322-5172
U OF NC

DEPERCZEL, JOHN LESLIE — ORS /GP AC
521 11TH AVE. CIRCLE NW — 72 73 81
HICKORY 28601 — 704 324-2800
LOYOLA U

MORETZ, JOSEPH ALFRED, III — ORS AC
250 18TH ST. CIRCLE, SE — 72 73 81
HICKORY 28602 — 704 322-5172
EMORY U

NICKS, CARL MICHAEL — ORS AC
250 18TH ST. CIRCLE, SE — 83 83 90
UNIFOUR MEDICAL COMMONS
HICKORY 28602 — 704 652-8300
U OF NC

PETERS, STANLEY — ORS AC
250 18TH ST. CIR. SE — 64 64 75
HICKORY 28602 — 704 322-5172
KING EDWARD COLL

SCHULTEN, HERBERT JOHN — ORS AC
912 SECOND ST. NE — 70 70 79
HICKORY 28601 — 704 324-2800
U OF MARYLAND

WINFIELD, HEBER GREY, III — ORS AC
250 18TH ST. CIRCLE, SE — 70 70 76
HICKORY 28602 — 704 322-5172
U OF NC

OTOLARYNGOLOGY

KING, HARRY LEE — OTO /HNS AC
PO BOX 2186 — 74 74 80
HICKORY 28603 — 704 322-5120
U OF VIRGINIA

O'CONNOR, ROBERT DARRELL — OTO AC
PO DRAWER 2484 — 60 67 67
HICKORY 28602 — 704 322-3725
MED COLL OF VA

THORNTON, JACK WALKER — OTO /HNS AC
P. O. DRAWER 2484 — 64 64 71
HICKORY 28603 — 704 322-3725
U OF MISSISSIPPI

WILLIAMS, ROBERT CYRUS, JR. — OTO AC
FAIRGROVE CHURCH ROAD — 71 72 79
BOX 2484
HICKORY 28603 — 704 322-3725
MED U OF SC

PSYCHIATRY

KIM, TONG SU — P AC
24 2ND AVE. NE — 51 51 70
HICKORY 28601 — 704 324-9900
SEOUL NATL U

PETERS, SARAH — P AC
RT. #4, BOX 215 — 64 83 90
CONOVER 28613
FATIMAH JINNAH

SCHMITT, PHILIP JULIAN — P /CHP AC
PO BOX 9149 — 80 83 85
HICKORY 28603 — 704 327-7888
GEORGETOWN U

TRADO, CHARLES ELEMENDORF — P /GP AC
MEDICAL ARTS BLDG. — 59 59 62
24 SECOND AVE. NE
HICKORY 28601 — 704 324-9900
U OF NC

PEDIATRICS

BATES, PAUL KENNETH, JR. — PD AC
240 18TH STREET CIRCLE, SE — 69 74 75
HICKORY 28602 — 704 322-2550
U OF LOUISVILLE

DIXON, ROBERT ROSS — PD AC
240 18TH ST. CIRCLE, SE — 68 68 75
HICKORY 28602 — 704 322-2550
BOWMAN GRAY

18. CATAWBA COMPONENT SOCIETY (Continued)

FROEDGE, JERRY KEITH PD AC 69 70 75
240 18TH STREET CIRCLE, SE
HICKORY 28602 704 322-2550
U OF LOUISVILLE

SPEES, LYNN BEECHER PD AC 75 75 73
THE CHILDHEALTH CENTER
1375 4TH ST. DR. NW
HICKORY 28601 704 322-4453
BOWMAN GRAY

SRAN, SARBJEET K. PD AC 83 57 88
1375 4TH ST. DR. NW
HICKORY 28601 704 322-4453
U OF MISSISSIPPI

PHYSICAL MEDICINE AND REHABILITATION

STUTESMAN, ANDREA A. PM AC 83 83 87
1877 N. CENTER ST.
HICKORY 28601 704 322-1300
LSU-SHREVEPORT

STUTESMAN, JAMES L. PM AC 83 83 87
1877 N. CENTER ST.
HICKORY 28601 704 322-1300
U OF TX-HOUSTON

PLASTIC SURGERY

FEWELL, JOSEPH EURANUS, JR. PS AC 74 79 84
415 N. CENTER ST., STE. 201
HICKORY 28601 704 322-8380
MED U OF SC

ANATOMICAL AND CLINICAL PATHOLOGY

BAUER, JOHN MONTGOMERY PTH AC 76 76 81
ROUTE #2, BOX 197
CONOVER 28613 704 322-3821
LA STATE U

GUARINO, GUY JOSEPH PTH AC 57 67 67
ROUTE #2, BOX 197
CONOVER 28613 704 322-3821
LA STATE U

PARKER, JAMES LEE PTH AC 63 63 71
RT. #2, BOX 197
CONOVER 28613 704 322-3821
U OF NC

VOGEL, JOSEPH VINCENT PTH AC 77 82 85
ROUTE #2, BOX 197
CONOVER 28613 704 322-3821
DUKE

PULMONARY DISEASES

OWENS, FREDERICK THOMAS PUD /IM AC 70 71 77
PO BOX 3033
HICKORY 28603 704 322-8265
MED COLL OF GA

POLLOCK, JOSEPH J. PUD /IM AC 58 60 87
PO BOX 3033
HICKORY 28603 704 322-8265
GEO WASHINGTON U

RADIOLOGY

BROOKS, THOMAS WILLIAM, III R /NM AC 62 62 71
521 THIRD AVENUE, N.W.
HICKORY 28601 704 322-2644
MED COLL OF GA

HARLAN, STEVEN DANE R AC 76 76 81
P. O. BOX 308
HICKORY 28603 704 322-2644
U OF MISSOURI

OWSLEY, JAMES HAROLD R /NM AC 57 58 64
P. O. BOX 308
HICKORY 28603 704 322-2644
U OF ALABAMA

SZABO, JANET ROSE R AC 79 85 86
P. O. BOX 308
HICKORY 28603 704 322-2644
U OF NC

RHEUMATOLOGY

NICKS, SALLY AGNER RHU /RHU AC 83 84 90
912 SECOND ST. NE
HICKORY 28601 704 322-1996
U OF NC

THERAPEUTIC RADIOLOGY

BELL, IRA EUGENE, JR. TR /R L/RT 45 50 51
508 6TH ST., NW
HICKORY 28601 704 322-0856
MED COLL OF GA

UROLOGICAL SURGERY

GERRARD, EDWARD ROLLAND U AC 67 67 75
1202 N. CENTER STREET
HICKORY 28601 704 322-4340
BAYLOR

HARDAWAY, DAVID M. U AC 83 84 89
1202 N. CENTER ST.
HICKORY 28601 704 322-4340
BOWMAN GRAY

KURAD, JOSEPH WARD U AC 60 67 67
1202 N. CENTER STREET
HICKORY 28601 704 322-4340
U OF MARYLAND

PIERCE, ROBERT JAMES, JR. U AC 64 64 71
1202 N. CENTER STREET
HICKORY 28601 704 322-4340
U OF NC

VASCULAR SURGERY

MCDOUGAL, EMORY GARY VS AC 77 82 84
RT. #2, BOX 190
CONOVER 28613 704 322-9105
U OF SOU ALA

19. CHATHAM COMPONENT SOCIETY

OFFICERS—**President:** Byron J. Hoffman, Jr., M.D., PO Box 689, Siler City 27344 (919 663-3360)
Secretary: Joan T. Jordan, M.D., P.O. Box 689, Siler City 27344 (919 633-3360)

FAMILY PRACTICE

DYKERS, JOHN REGINALD, JR. FP AC 60 60 78
P. O. BOX 565
422 N. IVY AVENUE
SILER CITY 27344 919 663-2931
U OF NC

HOLT, JAMES BEATTY FP AC 77 77 78
RT. #6, BOX 7
PITTSBORO 27312 919 542-2731
U OF NC

MCMANUS, KEITH ERIC FP AC 84 86 81
BOX 380, 801 W. THIRD ST.
SILER CITY 27344 919 663-0085
U OF NC

WHITE, FRANKLIN DELANO FP AC 59 59 61
P. O. BOX 567
SILER CITY 27344 919 663-2761
U OF NC

INTERNAL MEDICINE

HOFFMAN, BYRON JAY, JR. IM AC 76 77 81
421 N. HOLLY AVENUE
SILER CITY 27344 919 663-3360
EMORY U

JORDAN, JOAN THEA IM AC 83 84 90
PO BOX 689
SILER CITY 27344 919 663-3360
DUKE

PUBLIC HEALTH

BROWN, WALTER JOHN PH /FP AS 33 36 80
79 TRUNDLE RDG.FEARRINGTON
PITTSBORO 27312 919 933-9331
BERLIN U

20. CHEROKEE (GRAHAM) COMPONENT SOCIETY

OFFICERS—**President:** Helen L. Wells, M.D., 503 Peachtree St., Siler City 27344
Secretary: Thomas V. Clayton, M.D., West Main St., Andrews 28901

FAMILY PRACTICE

BLALOCK, FLOYD ESTON, JR. FP /GP AC 51 53 54
VALLEY RIVER CLINIC
ANDREWS 28901 704 321-4510
U OF TENNESSEE

GENERAL PRACTICE

STEPHENS, JAMES EDWARD GP AC 60 61 61
P. O. BOX 516
ROBBINSVILLE 28771 704 479-3392
MED COLL OF VA

WELLS, HELEN LEWIS GP AC 46 47 48
PO BOX 593
MURPHY 28906 704 837-4201
BOWMAN GRAY

INTERNAL MEDICINE

MITCHELL, BRIAN P. IM AC 74 76 87
PO BOX 158
MURPHY 28902 704 837-2696
U OF PITTSBURGH

UROLOGICAL SURGERY

MUGHARBIL, ZIYAD H. U AC 80 82 87
MURPHY MEDICAL CENTER
PHYSICIANS BLDG.
MURPHY 28906 704 837-7513
AMER.U OF BEIRUT

21. CHOWAN-PERQUIMANS COMPONENT SOCIETY

OFFICERS—**President:** Lance D. Potocki, M.D., PO Box 429, Edenton 27932 (919 482-2116)
Secretary: J. Christopher Perry, M.D., PO Box 429, Edenton 27932 (919 482-2116)

FAMILY PRACTICE

DEVINE, LEIBERT EARL FP AC
75 75 80
P. O. BOX 298
EDENTON 27932 919 482-7774
OHIO STATE U

LANE, ROBERT EARL FP AC
67 67 74
118 W. MARKET ST.
HERTFORD 27944 919 426-5711
TULANE U

POTOCKI, LANCE DEWITT FP AC
81 81 85
PO BOX 429
EDENTON 27932 919 482-2116
U OF MARYLAND

WRIGHT, DAVID ORLO FP AC
58 58 63
CHOWAN MEDICAL CENTER
EDENTON 27932 919 482-2116
BOWMAN GRAY

GENERAL SURGERY

VOIGT, WARD LANDIS GS AC
63 63 70
CHOWAN MEDICAL CENTER
EDENTON 27932 919 482-2116
U OF NC

INTERNAL MEDICINE

BOND, EDWARD GRIFFITH IM /CD L/RT
48 48 56
CHOWAN MEDICAL CENTER
PO BOX B
EDENTON 27932 919 482-2116
U OF VIRGINIA

HASKETT, JOSEPH RAY, JR. IM AC
76 76 82
PO BOX 1210
EDENTON INTERNAL MED. PA
EDENTON 27932 919 482-5171
U OF NC

OBSTETRICS AND GYNECOLOGY

BAKER, BERNIE BALLINGTON, SR. OBG AC
65 65 72
EDENTON OB-GYN CENTER,PA
P. O. BOX 990
EDENTON 27932 919 782-7407
DUKE

FRANCIS, JOHN ARLIE OBG AC
71 71 85
PO BOX 990
EDENTON 27932 919 482-7407
WEST VA U

OPHTHALMOLOGY

BLAKEMORE, WILLIAM STEPHEN OPH AC
79 80 84
101 MARK DR.
EDENTON 27932 919 482-7471
CO OF SURG-IRE

RADIOLOGY

BAKER, MARVIN I. R /NM AC
60 60 83
PO BOX 1047
EDENTON 27932 919 482-8446
U OF FLORIDA

23. CLEVELAND COMPONENT SOCIETY

OFFICERS—**President:** John L. Reynolds, M.D., 907 N. Washington St., Shelby 28150 (704 482-5716)
Secretary: Gregory A. Stidham, M.D., 1198 Wyke Rd., Shelby 28150 (704 482-5716)

FAMILY PRACTICE

JONES, ROBERT S.,JR.-BOBBY FP AC
81 81 79
421 W. MARION ST.
SHELBY 28150 704 484-8001
EAST CAROLINA U

INFECTIOUS DISEASES

GANGOO, ABDUL RASHID ID AC
68 76 83
810 W. KING STREET
KINGS MOUNTAIN 28086 704 739-8946
SRINAGAR MED SCH

ANESTHESIOLOGY

BROCKMAN, STEVEN KENNETH AN AC
85 86 90
300 E. GROVER ST.
SHELBY 28150 704 482-5716
CASE WESTERN RES

CHEANEY, RUSSELL ALAN AN AC
82 85 86
300 GROVER ST.
SHELBY 28150 704 482-5716
U OF LOUISVILLE

MUENCH, LAURENCE WALTER AN AC
62 62 84
310 DOWNING DR.
KINGS MOUNTAIN 28086 704 739-4683
WASHINGTON U

REYNOLDS, JOHN LAURENCE AN AC
80 86 87
404 MELODY LANE
SHELBY 28150 704 482-5716
AUTONOMA UNIV

CARDIOVASCULAR DISEASES

BOYETTE, DOUGLAS RAY CD /IM AC
75 75 80
808 SCHENCK STREET
SHELBY 28150 704 482-1482
BOWMAN GRAY

DERMATOLOGY

PEARSON, LAWRENCE HAMILTON D AC
79 80 83
700 N. LAFAYETTE ST.
SHELBY 28150 704 484-0464
U OF NC

DIAGNOSTIC RADIOLOGY

BLACKBURN, THOMAS REID DR AC
65 65 75
PO BOX 1148
SHELBY 28150 704 487-3141
BOWMAN GRAY

POWELL, JESS AVERETTE,III DR AC
73 75 79
201 GROVER STREET
SHELBY 28150 704 487-3141
U OF TENNESSEE

EMERGENCY MEDICINE

BANKOV, ROBERT WILLIAM EM AC
78 82 86
PO BOX 2366
SHELBY 28150 704 482-7972
U OF SOU ALA

BOMBENGER, JAMES JOHN EM /PUD AC
73 74 84
ROUTE #3, BOX 774-B
CONNELLY SPRINGS 28612 704 397-6147
U OF ILLINOIS

BRIDGES, THOMAS HOWARD EM AC
65 65 67
P. O. BOX 1706
SHELBY 28150 704 487-3134
U OF NC

CASH, TED FREEMON EM AC
85 85 83
RT. 1, BOX 141
SHELBY 28150 704 487-3131
EAST CAROLINA U

FAMILY PRACTICE

ADAMS, CHARLES HUBERT FP AC
58 59 59
PO BOX 1309
KINGS MOUNTAIN 28086 704 739-3681
U OF VIRGINIA

BRIGGS, DOUGLAS MERRILL FP AC
78 79 82
1198 WYKE ROAD
SHELBY 28150 704 487-1148
DOWNSTATE ME CTR

CARTER, NUMA RICHARDSON, JR. FP AC
50 50 57
512 DIXON BOULEVARD
SHELBY 28150 704 487-7540
BOWMAN GRAY

CONDIE, SCOTT DOUGLAS FP AC
75 78 82
1198 WYKE ROAD
SHELBY 28150 704 487-1148
U OF ILLINOIS

CROW, JOHN BUREN FP L/RT
48 49 50
600 CROW RD.
SHELBY 28150 704 487-7052
BOWMAN GRAY

DORN, ROBERT M. FP AC
85 85 88
PO BOX 815
BOILING SPRINGS 28017 704 434-2281
UNIV. OF S.C.

HARDEMAN, RICHARD AUSTIN FP AC
60 60 82
616 E. MARION STREET
SHELBY 28150 704 487-6338
EMORY U

JONES, MARY MCKEEL FP C
86 87 83
421 W. MARION ST.
SHELBY 28150 704 484-8001
EAST CAROLINA U

JONES, ROBERT SPURGEON FP AC
54 54 55
113 GROVER STREET
SHELBY 28150 704 487-5228
U OF NC

JONES, STEPHEN WATSON FP AC
86 87 84
113 GROVER ST.
SHELBY 28150 704 487-5228
EAST CAROLINA U

LEE, JOSEPH, III FP AC
63 64 65
711 W. MOUNTAIN STREET
PO BOX 1668
KINGS MOUNTAIN 28086 704 739-5456
MED U OF SC

MCGILL, JOHN CHARLES FP AC
46 50 52
PO BOX 1309
KINGS MOUNTAIN 28086 704 739-3681
VANDERBILT U

MILLER, ROBERT MICHAEL FP AC
67 68 76
1198 WYKE ROAD
SHELBY 28150 704 487-1148
U OF TENNESSEE

MOSS, THOMAS M. FP AC
82 83 80
123 W. MARION ST.
SHELBY 28150 919 481-1019
U OF NC

SINCOX, FRANCIS JOHN, JR. FP AC
58 63 64
PO BOX 1309
KINGS MOUNTAIN 28086 704 739-3681
EMORY U

23. CLEVELAND COMPONENT SOCIETY (Continued)

STIDHAM, GREGORY ALAN — FP AC 83 84 86
1198 WYKE RD.
SHELBY 28150
MED COLL OF VA
704 487-1148

WALKER, JOSEPH EDWARDS — FP /AI AC 60 62 63
EDWARD CLINIC
6433 FALLSTON ROAD
LAWNDALE 28090
DUKE
704 538-8616

WASHBURN, HARRILL GENE — FP AC 58 59 63
P. O. BOX 815
BOILING SPRINGS 28017
BOWMAN GRAY
704 434-2281

WHITE, THOMAS RHYNE — FP AC 80 80 77
112 S. OAK ST.
CHERRYVILLE 28021
DUKE
704 435-1100

GASTROENTEROLOGY

SPRAGINS, JOEL FRED — GE /IM AC 64 64 73
808 N. WASHINGTON ST.
SHELBY 28150
U OF ARKANSAS
704 482-1482

GENERAL PRACTICE

DAY, PHILIP MARK — GP AC 82 83 86
217 N. MAIN ST.
PO BOX 520
GROVER 28073
MICHIGAN ST U
704 937-7905

MAYBIN, RICHARD MADDEN — GP /HYP AC 46 46 52
109 BALL PARK RD.
LAWNDALE 28090
MED U OF SC
704 538-8532

WASHBURN, WILLARD WYAN — GP /FP L/RT 43 43 47
P. O. BOX 795
BOILING SPRINGS 28017
JEFFERSON
704 434-7910

GENERAL SURGERY

BARRINGER, MICHAEL LYNN — GS AC 76 76 84
904 MEADOWBROOK LANE
SHELBY 28150
U OF NC
704 482-6359

BOWLING, RICHARD FRANKLIN — GS AC 53 53 61
P. O. BOX 638
SHELBY 28150
BOWMAN GRAY
704 487-8591

CLONINGER, ROWELL CONNOR — GS L/RT 44 45 51
309 WESTFIELD RD.
SHELBY 28150
U OF MARYLAND
704 487-8591

HAMRICK, JOHN CARL — GS L/RT 35 35 40
P. O. BOX 668
SHELBY 28150
U OF MARYLAND
704 487-5132

HUNTER, JOHN BALDWIN — GS /GP L/RT 28 32 47
618 E. MARION STREET
SHELBY 28150
NEW YORK U
704 487-6022

JONES, CRAIG S. — GS L 36 36 38
4051 GULFSHORE BLVD. N'PH-205
NAPLES, FL 33940
INDIANA U
813 261-5609

LANEY, ROBERT GAFFNEY,III — GS AC 81 82 80
200 W. GROVER ST.
SHELBY 28150
U OF NC
704 487-8591

MCMURRY, AVERY WILLIS — GS AC 45 45 51
207 LEE STREET
SHELBY 28150
JEFFERSON
919 482-6350

NAMAN, CARL HAWKINS — GS /VS AC 67 68 75
1200 HARDIN DRIVE
SHELBY 28150
MED COLL OF GA
704 481-9131

PLONK, GEORGE WEBB — GS L/RT 44 45 53
902 CRESCENT CIRCLE
KINGS MOUNTAIN 28086
JEFFERSON
704 739-2272

POTTS, JAMES MARTIN — GS /TS AC 73 73 79
200 W. GROVER ST.
SHELBY 28150
MED COLL OF GA
919 487-8591

ROBINSON, CYNTHIA KAY — GS AC 84 85 84
707 W. KING ST.
KINGS MOUNTAIN 28086
BOWMAN GRAY
704 739-4749

ROBINSON, SAM — GS /TS AC 53 65 66
707 W. KING ST.
KINGS MOUNTAIN 28086
U OF TENNESSEE
704 739-4749

GYNECOLOGY

BURRUS, JAMES HENRY — GYN AC 57 57 64
P. O. BOX 1256
SHELBY 28150
U OF NC
704 482-2486

COLLINS, WARREN JAMES — GYN AC 48 57 67
105 GROVER STREET
SHELBY 28150
DUKE
704 482-2486

INTERNAL MEDICINE

ADAMS, FREDERICK F., III — IM /NEP AC 72 73 88
808 SCHENCK ST.
SHELBY 28150
MED U OF SC
704 482-1482

LANGLEY, CHARLES PITMAN, III — IM AC 75 76 79
808 SCHENCK STREET
SHELBY 28150
U OF NC
919 482-1482

MAYSE, RAY SCOTT — IM AC 76 79 80
608 W. KING ST.
KINGS MOUNTAIN 28086
BOWMAN GRAY
704 739-9776

MILLER, DONALD STUART — IM/HEM AC 62 62 78
1405-B N. LAFAYETTE ST.
SHELBY 28150
HARVARD
704 482-8936

OBSTETRICS AND GYNECOLOGY

BINION, GERALD RAY — OBG AC 62 62 74
110 W. GROVER STREET
SHELBY 28150
U TX-SOU.WESTERN
704 487-5258

CHAMBERLAIN, STEVEN A. — OBG AC 83 84 87
110 W. GROVER ST.
SHELBY 28150
MED U OF SC
704 487-5258

CHEN, KEH-FANG — OBG AC 68 72 78
604 W. KING ST.
KINGS MOUNTAIN 28086
TAIWAN U-TAIPEI
704 739-8059

DAVIS, THOMAS R. — OBG C 86 86 86
110 W. GROVER ST.
SHELBY 28150
BOWMAN GRAY
704 487-5258

EVANS, OTIS DRUELL, JR. — OBG L/RT 51 52 53
110 W. GROVER STREET
SHELBY 28150
U OF MARYLAND
704 487-5258

LAMPLEY, CHARLES GORDON, III — OBG AC 62 62 70
110 W. GROVER ST.
SHELBY 28150
BOWMAN GRAY
704 487-5258

OPHTHALMOLOGY

BAILEY, THOMAS DANIEL — OPH C 78 79 90
1413 N. LAFAYETTE ST.
SHELBY 28150
GEORGETOWN U
704 482-6767

GEBEL, EMILE LOUIS — OPH RT 62 62 67
134 CHAGRIN FARM RD.
SHELBY 28150
DUKE
704 482-6767

HANNAH, FRANK THOMAS — OPH AC 64 64 71
313 S. WASHINGTON STREET
SHELBY 28150
DUKE
704 482-0696

ORTHOPEDIC SURGERY

HAMRICK, JOHN CARL, JR. — ORS AC 67 67 76
110 W. GROVER STREET
SHELBY 28150
BOWMAN GRAY
704 487-1177

JACKSON, STALEY THOMAS — ORS C 79 86 90
608 W. KING ST.
KINGS MOUNTAIN 28086
OHIO STATE U
704 734-0199

MANGUM, GARY LIONELL — ORS AC 67 67 78
202 E. GROVER ST.
SHELBY 28150
BOWMAN GRAY
704 482-7311

OTOLARYNGOLOGY

WILLIAMS, JACK DEAN — OTO AC 65 65 73
209-B LEE ST.
PO BOX 1968
SHELBY 28150
DUKE
704 487-9088

PSYCHIATRY

VAN FLEET, WILLIAM VERNON — P /CHP AC 61 65 79
416 N. LAFAYETTE ST.
SHELBY 28150
GEO WASHINGTON U
704 482-7395

PEDIATRICS

BOWLES, RICHARD MORGAN — PD AC 52 53 55
101 GROVER STREET
SHELBY 28150
DUKE
704 482-1435

GILLIATT, CECIL LEE, JR., — PD AC 62 63 68
101 GROVER STREET
SHELBY 28150
HARVARD
704 482-1435

HAYEK, CHARLES S. — PD AC 85 87 84
101 GROVER ST.
SHELBY 28150
U OF NC
704 482-1435

MINUS, JOSEPH SHEPPARD — PD AC 65 65 71
101 GROVER STREET
SHELBY 28150
DUKE
704 482-1435

NORMAN, DAVID ALAN — PD C 86 87 90
101 GROVER ST.
SHELBY 28150
U OF ALABAMA
704 482-1435

SARAZEN, PAUL MARK, JR. — PD S/RT 48 50 55
101 GROVER STREET
SHELBY 28150
DUKE
704 482-1435

STALLINGS, MARTIN WADE — PD AC 69 70 76
108 EDGEMONT DR.
KINGS MOUNTAIN 28086
U OF ALABAMA
704 739-2521

ANATOMICAL AND CLINICAL PATHOLOGY

GENTRY, JOHN BILLY — PTH AC 59 59 67
307 S. POSTON STREET
SHELBY 28150
U OF NC
704 482-0241

23. CLEVELAND COMPONENT SOCIETY (Continued)

MILAM, WILLIAM FREER PTH AC 66 66 79
PO BOX 1268
SHELBY 28150 704 487-3147
OHIO STATE U

ROE, RODNEY ALLEN PTH AC 68 68 89
201 GROVER ST. 704 487-3147
SHELBY 28150
U OF ARKANSAS

PULMONARY DISEASES

HARRIS, THOMAS REGINALD PUD /IM AC 55 56 57
808 SCHENCK STREET 704 482-1482
SHELBY 28150
U OF TENNESSEE

RADIOLOGY

HARRELL, WARREN LAMAR, JR. R AC 58 67 67
1237 BROOKWOOD DRIVE 704 482-3880
SHELBY 28150
EMORY U

STORY, WILLIAM AUGUSTUS R /IM AC 58 66 67
201 GROVER STREET 704 487-0003
SHELBY 28150
EMORY U

TOFFOLO, RUDOLF RONALD R AC 57 58 84
120 GOLD RUN CT. 704 739-3712
KINGS MOUNTAIN 28086
ST U OF NY-BUFF

RHEUMATOLOGY

FERRELL, PAUL BRENT RHU /IM AC 75 75 84
808 SCHENCK ST. 704 482-1482
SHELBY 28150
U OF NC

THORACIC SURGERY

INJEJIKIAN, JIRAIR ALEXAN TS /GS AC 61 61 70
709 GROVER STREET 704 482-8371
SHELBY 28150
AMER.U OF BEIRUT

UROLOGICAL SURGERY

BARKER, DAVID BERT U AC 71 71 80
1001 N. WASHINGTON ST. 704 482-2011
SHELBY 28151
U OF TENNESSEE

BLACKLEY, SHEM K., III U AC 83 88 89
1001 N. WASHINGTON ST. 704 482-2011
SHELBY 28150
BOWMAN GRAY

GOSSETT, ROBERT PETER U AC 77 80 83
1001 N. WASHINGTON ST. 704 482-2011
SHELBY 28150
U TX-SAN ANTONIO

KELLY, JOHNSON HALL U AC 78 78 84
1001 N. WASHINGTON ST. 704 482-2011
SHELBY 28150
BOWMAN GRAY

SECREST, ALVIN JACKSON, JR. U AC 63 63 71
1001 N. WASHINGTON STREET 704 482-2011
SHELBY 28150
BOWMAN GRAY

24. COLUMBUS COMPONENT SOCIETY

OFFICERS—**President:** Henry W. Traylor, Jr., M.D., 903 E. Jefferson St., Whiteville 28472 (919 642-6121)
Secretary: Allan Menachem, M.D., 903 E. Jefferson St., Whiteville 28472 (919 642-6121)

ANESTHESIOLOGY

DIMITRIOUS, ROBIN AN AC 66 77 81
P. O. BOX 364 919 642-8011
WHITEVILLE 28472
EIN SHAMS U

FAMILY PRACTICE

BULLOCK, THURMAN MONROE, JR. FP /A RT 61 61 63
PO BOX 465 919 654-5369
CHADBOURN 28431
BOWMAN GRAY

CARROLL, FRANCIS MURRAY FP /A AC 55 55 57
104 SEVENTH AVENUE 919 654-3143
CHADBOURN 28431
BOWMAN GRAY

COLLIER, ROBERT FP /IM AC 54 55 88
104 7TH AVE. 919 654-3143
CHADBOURN 28431
U OF COLORADO

COTTLE, RONALD WADE FP AC 83 84 86
118 E. WALTER ST. 919 642-2706
WHITEVILLE 28472
U OF NC

GRUBB, STEPHEN DALE FP AC 75 76 79
PIREWAY RD.
PO BOX 675
TABOR CITY 28463 919 653-2113
WASHINGTON U

STOUT, WILLIAM ALLEN FP AC 61 61 63
P. O. BOX 675 919 653-2112
TABOR CITY 28463
BOWMAN GRAY

THIGPEN, FRONIS RAY FP /PD AC 76 77 75
805 S. MADISON STREET 704 642-6121
WHITEVILLE 28472
U OF NC

WYCHE, JOSEPH THOMAS FP L/RT 41 41 48
RT. #7, BOX 30
WHITEVILLE 28472
U OF PENN

GENERAL PRACTICE

BUNN, DAVID GLENN GP AC 47 47 49
EAST MAIN STREET 919 642-2016
WHITEVILLE 28472
U OF MARYLAND

FLOYD, ANDERSON GAYLE GP L/RT 37 37 39
302 N. THOMPSON STREET 919 642-2150
WHITEVILLE 28472
MED U OF SC

WILLIAMSON, ROSSIE MARSHALL GP L/RT 37 37 40
PO BOX 3385 803 249-2126
NORTH MYRTLE BEACH,SC 29582
U OF PENN

GENERAL SURGERY

BAREFOOT, WILLIAM FREDERICK GS L/RT 34 34 35
P. O. BOX 573 919 642-3256
WHITEVILLE 28472
TULANE U

CHANGAPPA, BADUVANDA U. GS AC 73 83 90
PO BOX 1307 919 642-4711
WHITEVILLE 28472
MYSORE U

DONAYRE, LUIS ERNESTO GS /TS AC 59 67 68
144 JEFFERSON STREET 919 642-3136
WHITEVILLE 28472
SAN MARCOS U

MUKAMAL, RONALD SASSON GS /ORS AC 64 65 73
333 JEFFERSON STREET 919 642-2336
WHITEVILLE 28472
ST U OF NY-BUFF

WALTERS, HEZEKIAH GROVER, JR. GS S/RT 48 48 53
220 JEFFERSON ST. 919 642-3214
WHITEVILLE 28472
U OF MARYLAND

WALTERS, RONALD MARTIN GS /VS AC 81 81 79
220 JEFFERSON ST. 919 642-3214
WHITEVILLE 28472
U OF NC

GYNECOLOGY

WHEATLEY, SAMUEL NALLY GYN AC 75 76 79
BALDWIN WOODS 919 642-3294
WHITEVILLE 28472
U OF KENTUCKY

INTERNAL MEDICINE

HODGSON, JOHN D. IM AC 82 83 88
PO BOX 1249 919 642-0331
WHITEVILLE 28472
GEORGETOWN U

MENACHEM, ALLAN IM /GE AC 72 74 90
903 JEFFERSON ST. 919 642-6121
WHITEVILLE 28472
U OF BOLOGNA

MUNROE, JOHN FRANCIS IM /END AC 60 60 68
BALDWIN WOODS, S.W. 919 642-2230
P. O. BOX 1249
WHITEVILLE 28472
U OF NC

TRAYLOR, HENRY WILLIAM, JR. IM /EM AC 77 79 83
903 E. JEFFERSON ST. 919 642-6121
WHITEVILLE 28472
GEORGETOWN U

OBSTETRICS AND GYNECOLOGY

HINTON, JEFFREY TAYLOR OBG AC 84 85 89
BALDWIN WOODS GYNECOLOGY 919 642-3294
WHITEVILLE 28472
U OF KENTUCKY

KINDSCHUH, PETER MICHAEL OBG AC 80 80 85
BALDWIN WOODS 919 642-3294
WHITEVILLE 28472
LOYOLA U

ORTHOPEDIC SURGERY

OGDEN, WILLIAM SINGLETON ORS AC 65 67 89
600 N. MADISON ST. 919 642-0337
WHITEVILLE 28472
MED COLL OF GA

ANATOMICAL AND CLINICAL PATHOLOGY

PIECH, KENNETH STOWELL PTH AC 75 78 83
1211 PINKNEY ST. 919 642-8011
WHITEVILLE 28472
DUKE

RADIOLOGY

WALTON, GEORGE BRITAIN, JR. R /NM AC 56 56 64
P. O. BOX 345 919 642-8011
CHADBOURN 28431
DUKE

UROLOGICAL SURGERY

GLINSKI, RONALD PETER U /PTH AC 75 76 81
720 JEFFERSON ST. 919 642-5832
WHITEVILLE 28472
U OF MICHIGAN

MELSER, MARC ALAN U AC 84 84 91
720 JEFFERSON ST. 919 642-5832
WHITEVILLE 28472
GEORGETOWN U

25. CRAVEN-PAMLICO-JONES COMPONENT SOCIETY

OFFICERS—**President:** Mark A. Sinning, M.D., 800 Hospital Dr., New Bern 28561 (919 638-8118)
Secretary: Harry H. Ballard, M.D., 701 Newman Rd., New Bern 28560 (919 633-2081)
Executive Secretary: Helen C. Harrell, PO Box 2157, New Bern 28560 (919 633-8607)

NO SPECIALTY LISTED

DEAN, DEWEY LEVAN, JR. AC 86 87 90
2000 NEUSE BLVD.
NEW BERN 28560
MED U OF SC
919 633-3058

ANESTHESIOLOGY

GOODHALL-GUNN, PATRICIA AN AC 54 55 84
PO BOX 983
NEW BERN 28563
U OF LIVERPOOL
919 633-6117

CARDIOVASCULAR DISEASES

BECKWITH, GEORGE HUGHES CD /IM AC 71 71 76
PO BOX 2554
702 NEWMAN RD. MCCARTHY SQ.
NEW BERN 28560
U OF VIRGINIA
919 633-5333

MCQUADE, JOHN FRANCIS, III CD AC 73 75 78
PO BOX 2566
NEW BERN 28561
YALE
919 633-1010

OLIVER, DAVID CLARK CD /IM AC 74 74 78
702 NEWMAN RD.
MCCARTHY SQUARE
NEW BERN 28560
BOWMAN GRAY
919 633-5333

DERMATOLOGY

GRECO, PETER PAUL D AC 67 68 74
1914 NEUSE BLVD.
NEW BERN 28561
MED SCH-UMDNJ
919 633-1817

DIAGNOSTIC RADIOLOGY

BUFF, SAMUEL JOSEPH DR AC 77 79 83
P. O. BOX 2065
NEW BERN 28560
DUKE
919 633-5057

EMERGENCY MEDICINE

JURGELSKY, WILLIAM EM AC 67 67 90
2000 NEUSE BLVD.
NEW BERN 28560
DUKE
919 633-8104

REIDA, RONALD JACK EM /PD AC 67 67 84
4514 GREENVIEW RD.
NEW BERN 28562
U OF KANSAS
919 637-4016

FAMILY PRACTICE

BURNETT, JOHN WESLEY, JR. FP AC 71 71 76
810 KENNEDY AVE.
NEW BERN 28560
MED COLL OF VA
919 633-1678

DEGRAW, MARTIN CRAWFORD FP AC 81 84 79
810 KENNEDY AVE.
NEW BERN 28560
BOWMAN GRAY
919 633-1685

DUFFY, CHARLES FP L 30 30 34
1506 LUCERNE WAY
NEW BERN 28560
JEFFERSON
919 637-2077

EVANS, BRYAN DEAN FP AC 87 90 84
810 KENNEDY AVE.
NEW BERN 28560
BOWMAN GRAY
919 633-1678

HUDSON, RICHARD WOODARD FP AC 61 61 64
PO BOX 729
PAMLICO MEDICAL CTR. PA
BAYBORO 28515
U OF NC
919 745-3191

LITTLE, HENRY REECE, JR. FP L/RT 51 53 53
800 HOSPITAL DRIVE
NEW BERN 28560
MED COLL OF VA
919 637-6118

MAHANEY, JOHN PHILIP, JR. FP AC 71 74 76
810 KENNEDY AVE.
NEW BERN 28560
MED COLL OF VA
919 633-1678

MANLEY, JAMES JOSEPH FP /EM AC 78 80 84
800 HOSPITAL DR. STE. #6
PO BOX 2585
NEW BERN 28561
MED SCH-UMDNJ
919 637-6193

MOORE, STALEY COOK FP AC 82 83 91
810 KENNEDY AVE.
NEW BERN 28560
U OF NC
919 633-1678

OVERBY, JOSEPH RANDAL, JR. FP AC 71 71 76
810 KENNEDY AVE.
NEW BERN 28560
BOWMAN GRAY
919 633-1678

WILLI, MARC ANTHONY FP AC 83 84 90
1405 TOSTO CIRCLE
ORIENTAL 28571
WRIGHT STATE U
919 745-3191

GASTROENTEROLOGY

MOELLER, WENDY PAULSON GE /IM AC 77 78 83
P. O. BOX 68
POLLOCKSVILLE 28573
DUKE
919 633-1010

GENERAL PRACTICE

BENNETT, JOHN JOE GP /OM AC 60 60 79
102 GIBBS ROAD
NEW BERN 28560
U OF MARYLAND
919 633-0709

BLACKERBY, JAMES GP L/RT 32 32 66
1807 TRYON ROAD
NEW BERN 28560
U OF LOUISVILLE
919 637-3424

DUNN, ERNEST CLINTON, JR. GP AC 79 79 79
PO BOX 729
PAMLICO MEDICAL CTR., PA
BAYBORO 28515
U OF NC
919 633-1616

HAMMOND, ALFRED FRANKLIN, JR. GP L/RT 34 34 37
1514 TRENT BOULEVARD
NEW BERN 28560
JEFFERSON
919 637-6066

NASHICK, GEORGE HENRY GP AC 75 75 76
PO BOX 729
PAMLICO MEDICAL CTR., PA
BAYBORO 28515
U OF CONNECTICUT
919 745-3191

WARREN, JOSEPH BENJAMIN GP AC 51 52 54
203 PINE ROAD
NEW BERN 28560
DUKE
919 637-5888

GENERAL SURGERY

BALLARD, HARRY HAMPTON GS /VS AC 71 76 82
701 NEWMAN RD.
NEW BERN 28562
WEST VA U
919 633-2081

BLACKERBY, JAMES NICHOLAS GS AC 56 63 64
701 NEWMAN RD.
NEW BERN 28562
U OF LOUISVILLE
919 633-2081

GRICE, ORMOND DREW GS AC 67 67 77
701 NEWMAN RD.
NEW BERN 28562
U OF NC
919 633-2081

MORGAN, RICHARD EARL GS AC 73 73 78
701 NEWMAN RD.
NEW BERN 28562
BOWMAN GRAY
919 633-2081

MOSTELLAR, HENRY CURTIS, III GS AC 83 85 84
701 NEWMAN RD.
NEW BERN 28562
U OF SOU ALA
919 633-2081

PATTERSON, F. M. SIMMONS GS L/RT 39 39 47
4503 MORGAN LANE
NEW BERN 28560
U OF PENN
919 633-3492

GYNECOLOGY

RICHARDSON, ERNEST C., JR. GYN /OBS L/RT 43 43 48
4001 TRENT PINES DR.
NEW BERN 28560
JEFFERSON
919 633-3942

INFECTIOUS DISEASES

MOELLER, MARK BOLTON ID /IM AC 77 81 82
P. O. BOX 68
POLLOCKSVILLE 28573
DARTMOUTH U
919 633-1010

INTERNAL MEDICINE

BAGGETT, JOHN ROBERT IM AC 56 56 63
702 NEWMAN ROAD
MCCARTHY SQUARE
NEW BERN 28560
U OF NC
919 633-5333

BELL, EDWIN LILLINGTON IM /PUD AC 82 83 79
702 NEWMAN RD.
PO BOX 2554
NEW BERN 28560
DUKE
919 633-5333

BENDER, NEIL CARMICHAEL IM AC 63 63 68
P. O. BOX 68
POLLOCKSVILLE 28573
U OF NC
919 633-1010

BOUNOUS, CHRISTINE G. IM AC 82 84 88
BOX 68
POLLOCKSVILLE 28573
DUKE
919 633-1010

BOUNOUS, EDWIN P., JR. IM AC 80 84 88
BOX 68
POLLOCKSVILLE 28573
DUKE
919 224-4591

COOPER, LYLE RAY IM AC 80 81 80
702 NEWMAN RD.
PO BOX 2554
NEW BERN 28560
U OF NC
919 633-5333

DAVIS, MICHAEL LEE IM AC 74 75 79
PO BOX 2566
NEW BERN 28561
WEST VA U
919 224-4591

GAGE, LAWRENCE E. IM /CD AC 80 81 86
EASTERN CAROLINA IM, PA
532 WEBB BLVD.
HAVELOCK 28532
VANDERBILT U
919 224-4591

GOODWIN, BONNIE JEANNE IM /ON AC 77 83 86
PO BOX 68
POLLOCKSVILLE 28573
DARTMOUTH U
919 633-1010

HORNBAKE, EARL RODNEY, III IM /GER AC 76 77 79
FARM LIFE AVE.
VANCEBORO 28586
U OF PITTSBURGH
919 244-1785

25. CRAVEN-PAMLICO-JONES COMPONENT SOCIETY (Continued)

ING, FRANCIS PARKER IM L/RT
210 WILSON POINT 46 46 53
NEW BERN 28562 919 637-5411
HARVARD

ITTLE, SUZANNE BROWN IM /CD AC
800 HOSPITAL DRIVE 49 53 53
NEW BERN 28560 919 637-6118
MED COLL OF VA

IOORE, RONALD ALVIN IM /ON AC
702 NEWMAN ROAD 72 72 76
MCCARTHY SQUARE
NEW BERN 28560 919 633-5333
U OF NC

OCOCK, DONALD ANDREW IM /ID AC
5003 TRENT WOODS DRIVE 73 74 81
NEW BERN 28560 919 633-1010
CASE WESTERN RES

RESTON, RONALD ALLYN IM AC
PO BOX 2566 70 70 76
NEW BERN 28562 919 633-1010
MED COLL OF VA

OWARNICKY, MICHAEL R. IM /NM AC
PO BOX 68 83 83 88
POLLOCKSVILLE 28573 919 633-1010
OHIO STATE U

VILKINS, KENNETH WORTH, JR. IM AC
702 NEWMAN ROAD 80 81 84
MCCARTHY SQUARE
NEW BERN 28560 919 633-5333
U OF NC

EUROLOGY

ALLENGER, CLARENCE EUGENE, III N AC
227 MEMORIAL DRIVE. 78 79 82
JACKSONVILLE 28540 919 633-4551
MED U OF SC

REISAT, KHALED F. N /CHN AC
PO BOX 2588 78 83 87
NEW BERN 28561 919 633-3744
MED U OF PECS

IUTHER, ELLIS FRANK N /P AC
PO BOX 2588 60 60 70
NEW BERN 28561 919 633-3744
TULANE U

EUROLOGICAL SURGERY

ACKSON, JAMES ROBERT NS AC
2713 NEUSE BLVD. 56 56 90
NEW BERN 28560 919 633-6070
DUKE

VILFONG, ROBERT FARRINGTON NS AC
2713 NEUSE BLVD. 67 67 76
NEW BERN 28560 919 633-6070
DUKE

BSTETRICS AND GYNECOLOGY

USTARD, VICTOR WILLIAM OBG /GYN AC
800 HOSPITAL DR., STE. #2 59 76 78
NEW BERN 28560 919 633-3339
DALHOUSIE U

AHN, MICHAEL WAYNE OBG AC
801 MCCARTHY BLVD. 82 82 86
NEW BERN 28560 919 633-3942
LA STATE U

OYNER, RONNIE STEPHEN OBG AC
801 MCCARTHY BLVD. 76 76 81
NEW BERN 28560 919 633-3942
U OF NC

ARTIN, DENNIS KEITH OBG AC
903 PINETREE DRIVE 78 78 78
NEW BERN 28560 919 633-4005
U OF NC

ARKER, CHARLES LAWRENCE OBG /GYN AC
801 MCCARTHY BLVD. 73 73 76
NEW BERN 28560 919 633-3942
INDIANA U

RAWLS, WILLILAM CLEATON,JR. OBG AC
801 MCCARTHY BLVD. 85 85 90
NEW BERN 28560 919 338-2151
BOWMAN GRAY

TINGA, JOHN HINNES OBG AC
903 PINE TREE DRIVE 75 75 81
NEW BERN 28560 919 633-4005
BOWMAN GRAY

TRULUCK, THOMAS BRIAN OBG AC
903 PINE TREE DRIVE 75 75 81
NEW BERN 28560 919 633-4005
MED U OF SC

OPHTHALMOLOGY

CAMERON, HAROLD H. OPH AC
802 MCCARTHY BLVD. 70 70 87
NEW BERN 28562 919 633-4183
U OF NC

CHANCE, JAMES KENNETH OPH AC
802 MCCARTHY BLVD. 76 76 81
NEW BERN 28560 919 633-4183
BOWMAN GRAY

DAVIDSON, ANDREW OPH AC
802 MCCARTHY BLVD. 69 69 76
NEW BERN 28560 919 633-4183
U OF NC

ORTHOPEDIC SURGERY

ARMISTEAD, RAY BAXTER ORS AC
1315 S. GLENBURNIE RD. STE. 7 76 77 80
NEW BERN 28562 919 633-3256
GEORGETOWN U

BLAIR, ROBERT GILLESPIE, JR. ORS AC
P. O. DRAWER 1694 70 70 77
TRIANGLE PLAZA
NEW BERN 28560 919 633-4477
U OF NC

HILLER, CARL JULIEN ORS AC
P. O. DRAWER 1694 62 62 69
NEW BERN 28560 919 633-3256
MED U OF SC

TAYLOE, JOHN COTTEN, JR. ORS AC
P. O. DRAWER 2604 60 60 66
NEW BERN 28560 919 633-1635
U OF NC

VANDERSEA, HAROLD MARK ORS AC
800 HOSPITAL DRIVE 70 71 78
NEW BERN 28560 919 638-8113
ST U OF NY-BUFF

WERTMAN, MARK GRAHAM ORS AC
PO DRAWER 1694 80 81 85
TRIANGLE PLAZA
NEW BERN 28560 919 633-4477
WEST VA U

OTOLARYNGOLOGY

GRADY, RICHARD DWIGHT OTO /HNS AC
P. O. BOX 2406 77 77 83
709 PROFESSIONAL DR.
NEW BERN 28560 919 638-2666
U OF NC

HALL, WILLIAM JAMES, JR. OTO AC
P. O. BOX 2406 77 80 83
NEW BERN 28561 919 638-2666
U OF LOUISVILLE

MACDONALD, HENRY JOHN, JR. OTO AC
PO BOX 2406 69 69 75
709 PROFESSIONAL DR.
NEW BERN 28560
U OF NC

STONE, HARRY BENJAMIN, III OTO /A AC
709 PROFESSIONAL DR. 65 65 73
PO BOX 2406
NEW BERN 28560 919 638-2666
DUKE

PSYCHIATRY

WILLINGHAM, SHARON J. G. P AC
2002 S. GLENBURNIE 81 82 88
PO BOX 2068
NEW BERN 28560 919 636-5503
U OF LOUISVILLE

PEDIATRICS

AIKEN, HOVEY EUGENE, JR. PD AC
707 PROFESSIONAL DRIVE 56 63 64
NEW BERN 28560 919 633-2900
MED U OF SC

BARDEN, GRAHAM ARTHUR, III PD AC
707 PROFESSIONAL DR. 82 82 79
NEW BERN 28560 919 633-2900
DUKE

BARDEN, GRAHAM ARTHUR, JR. PD AC
707 PROFESSIONAL DRIVE 48 48 53
NEW BERN 28560 919 633-2900
DUKE

BEAL, DOUGLAS WAYNE PD AC
ECU DEPT. OF COMMUNITY PED. 80 82 88
PO BOX 1390
NEW BERN 28560 919 633-4496
CHICAGO MED SCH

DAVIS, JUNIUS WEEKS, JR. PD /PH L/RT
2107 AMHURST BLVD. 46 46 50
BERNE VILLAGE, APT. 6C
NEW BERN 28561 919 637-6367
MED U OF SC

MAY, RONALD BRUCE PD /HEM AC
CRAVEN COUNTY HOSPITAL 73 74 84
P. O. BOX 1390
NEW BERN 28560 919 633-4121
U OF PENN

WARREN, CALVIN GLENN, JR. PD AC
707 PROFESSIONAL DR. 86 87 90
NEW BERN 28560 919 633-2900
U OF NC

PUBLIC HEALTH

BAREFOOT, VERNA YOUNG PH L/RT
2504 OLD CHERRY POINT ROAD 50 51 53
NEW BERN 28560 919 637-5574
GEO WASHINGTON U

PLASTIC SURGERY

WINTERS, RICHARD RIZER WALKER PS AC
1425 GLENBURNIE RD. 70 70 86
NEW BERN 28560 919 637-6800
ST LOUIS U

PATHOLOGY, ANATOMICAL AND CLINICAL

NEWELL, ROBERT B., JR. PTH /CLP AC
2000 NEUSE BLVD. 70 73 87
NEW BERN 28560 919 633-8058
NORTHWESTERN U

WARD, RICHARD M. PTH AC
3 BATTS HILL RD. 80 83 82
NEW BERN 28562 919 633-8682
DUKE

PULMONARY DISEASES

EVERETT, ROY NATHAN PUD AC
PO BOX 68 79 80 84
POLLOCKSVILLE 28573 919 522-4094
EASTERN VA

HUNT, WILLIAM BRYCE, JR. PUD /IM AC
P. O. BOX 2157 53 53 76
NEW BERN 28560 919 633-8608
BOWMAN GRAY

25. CRAVEN-PAMLICO-JONES COMPONENT SOCIETY (Continued)

RADIOLOGY

BELL, WILLIAM HARRISON, JR. R /NM AC
46 46 53
P. O. BOX 2065
NEW BERN 28560 919 633-5057
CORNELL U

BOYD, DALE WOODS R AC
61 62 90
300 AUGUSTA CT.
NEW BERN 28562 919 633-1010
HAHNEMANN

JACKSON, DONALD CHARLES R AC
54 55 73
P. O. BOX 2065
NEW BERN 28560 919 633-5057
SHEFFIELD U

RHEUMATOLOGY

MOELLER, GARLAND RADFORD RHU /IM AC
77 78 83
532 WEBB BLVD.
HAVELOCK 28532 919 447-7088
DUKE

THERAPEUTIC RADIOLOGY

GREWAL, SATPAL KAUR TR AC
63 76 82
CRAVEN REGIONAL MEDICAL CTR.
PO BOX 5117
NEW BERN 28560 919 633-8730
M C OF AMRITSAR

THORACIC SURGERY

SINNING, MARK ALAN TS /VS AC
78 79 87
800 HOSPITAL DR.
NEW BERN 28560 919 638-8118
U OF KANSAS

UROLOGICAL SURGERY

LASATER, JOHN DAVID U AC
78 79 87
800 HOSPITAL DR., STE. 4
NEW BERN 28560 919 633-2712
U OF OKLAHOMA

MILLNS, DALE THOMAS U L/RT
46 53 53
213 JOHNSON ST.
NEW BERN 28560 919 637-4788
CASE WESTERN RES

UNDERHILL, THURLOW REED U AC
70 70 78
800 HOSPITAL DRIVE, STE. #4
NEW BERN 28560 919 633-2712
U OF NC

VASCULAR SURGERY

BELL, WILLIAM HARRISON,III VS /TS AC
80 81 78
800 HOSPITAL DR. SUITE 10
NEW BERN 28560 919 638-8118
DUKE

26. CUMBERLAND COMPONENT SOCIETY

OFFICERS—**President:** John G. Briggs, M.D., 1774 Metro Medical Dr., Fayetteville 28304 (919 323-1203)
Secretary: Arlyn Moeller, M.D., 1307 Avon St., Fayetteville 28304 (919 323-1718)

ADMINISTRATIVE MEDICINE

GODWIN, HAROLD LACY ADM AC
47 47 53
1601-B OWEN DRIVE
FAYETTEVILLE 28304 919 323-1152
HARVARD

HOFFMAN, EDNA TERESA MAURA ADM AC
54 54 73
404 VALLEY RD.
FAYETTEVILLE 28305 919 485-4755
MED COLL OF VA

MILLER, DUDLEY ADM /OBG AC
59 59 70
150 ROBESON STREET
FAYETTEVILLE 28301 919 483-3156
U OF MISSOURI

ALLERGY/IMMUNOLOGY

KIM, SARAH AI AC
50 50 82
1317 MEDICAL DR. STE. #3
FAYETTEVILLE 28304 919 323-3890
LOMA LINDA U

ANESTHESIOLOGY

BECKHAM, DAVID ROBERTSON AN AC
62 68 69
1762 METROMEDICAL DR.
FAYETTEVILLE 28302 919 323-5491
MED U OF SC

LEAK, JESSIE ARONOW AN AC
84 85 89
PO BOX 53844
FAYETTEVILLE 28305 919 323-5491
U TX-SAN ANTONIO

MAY, CHARLES RAYSOR, III AN AC
62 62 84
2345 ROLLING HILL RD.
FAYETTEVILLE 28304 919 323-5491
MED U OF SC

RAMPULLA, ELLIOT JOHN AN AC
72 72 82
2220 WESTHAVEN DR.
PO BOX 65137
FAYETTEVILLE 28306 919 323-5491
BOWMAN GRAY

WALLIN, ROLF BOLIN AN AC
84 85 83
2604 FASHION LANE
FAYETTEVILLE 28304 919 323-6061
U OF NC

WITHERS, LARRY DALE AN AC
77 79 81
150 ELLERSLIE DR.
FAYETTEVILLE 28303 919 864-5117
EMORY U

CARDIOVASCULAR DISEASES

GARISON, GARY BROWN CD /IM AC
62 62 71
3629 CAPE CENTER DR.
FAYETTEVILLE 28304 919 484-6154
TEMPLE U

GILBERT, DAVID BRANSON CD /IM AC
65 65 81
1756 METROMEDICAL DRIVE
FAYETTEVILLE 28304 919 323-1322
U OF COLORADO

LEVINER, JOHN L., JR. CD AC
68 68 89
1756 METROMEDICAL DR.
FAYETTEVILLE 28304 919 323-1322
MED U OF SC

LOHAVICHAN, VIRAT CD /IM AC
63 64 73
1314 MEDICAL DR., #101
FAYETTEVILLE 28304 919 323-1315
SIRIRAJ HOSP U

DERMATOLOGY

ROTHSTEIN, MANFRED SHELDON D AC
74 75 77
1308 MEDICAL DRIVE
FAYETTEVILLE 28304 919 323-2227
DUKE

SHEREFF, RICHARD HENRY D /A AC
70 71 78
139 HUNTER CIRCLE
FAYETTEVILLE 28304 919 323-4888
U OF TENNESSEE

DIAGNOSTIC RADIOLOGY

BINDER, GEORGE ARTHUR DR AC
73 74 84
401 LAKESHORE DR.
FAYETTEVILLE 28305 919 484-4028
U OF ILLINOIS

EASTERBROOK, JAMES STILWELL DR AC
73 73 90
101 ROBESON ST., STE. 100
FAYETTEVILLE 28301 919 483-9900
BAYLOR

ELLISON, GERALD LYNN DR AC
65 65 73
2000 GALAX DR.
FAYETTEVILLE 28304 919 323-2012
GEO WASHINGTON U

HARANATH, BOGOLU S.S. DR AC
73 74 89
3677 GLEN BARRY CIR.
FAYETTEVILLE 28304 919 323-2012
GUNTUR MED COLL

ROBERTS, LEROY, JR. DR AC
76 81 89
3130-G TURTLE PT. DR.
FAYETTEVILLE 28304 919 323-2012
TEMPLE U

ROBINSON, RONALD E. DR AC
79 83 88
1329 ROBESON ST.
FAYETTEVILLE 28305 919 323-2012
MED COLL OF VA

ZELLNER, PAULA WATKINS DR AC
80 82 89
329 SUMMERTIME RD.
FAYETTEVILLE 28303 919 323-2012
U OF MONTERREY

FAMILY PRACTICE

AUL, CHRISTOPHER TAYLOR FP AC
77 80 85
4092 PROFESSIONAL DR.
HOPE MILLS 28348 919 424-012
WASHINGTON U

BAREFOOT, KAREN DIANE FP AC
87 88 89
4092 PROFESSIONAL DR.
HOPE MILLS 28348 919 424-012
EAST CAROLINA U

BARRY, WILLIAM FP /EM AC
56 56 57
121 ELLERSIE DR.
FAYETTEVILLE 28303 919 864-741
U OF NC

BLUE, JOHN FREDERICK, JR. FP AC
78 79 84
4092 PROFESSIONAL DR.
HOPE MILLS 28348 919 424-012
GEO WASHINGTON U

CATES, NADY MILTON, III FP AC
73 76 79
1806 LAKESHORE DR.
FAYETTEVILLE 28305 919 484-095
U OF NC

COOK, WILLIAM EUGENE FP /PUD L/RT
30 30 34
325 N. COOL SPRING ST. #104
FAYETTEVILLE 28301 919 484-532
WASHINGTON U

FULLER, WAYNE TEMPLETON FP AC
80 81 87
1601-B OWEN DR.
FAYETTEVILLE 28305 919 323-115
MED COLL OF VA

GASKINS, RAYMOND ALBERT, JR. FP /OM AC
75 75 83
405 OWEN DR.
FAYETTEVILLE 28304 919 323-318
U OF NC

HENLEY, DOUGLAS EUGENE FP AC
77 77 79
1806 PUGH ST.
FAYETTEVILLE 28305 919 424-012
U OF NC

LARSEN, LARS CHRISTIAN FP AC
73 74 81
1601 OWEN DRIVE
FAYETTEVILLE 28304 919 323-115
SUNY-SYRACUSE

26. CUMBERLAND COMPONENT SOCIETY (Continued)

MEHTA, HASUMATI VIJAYKUMAR FP /OBG AC
518 SANDHURST DR. 69 75 75
FAYETTEVILLE 28304 919 323-4091
U OF BOMBAY

MELTZER, MORTON FP
ROUTE #1, BOX 231-A 65 65 70
CAMERON 28326 919 245-4819
NEW YORK MED COL

MOELLER, ARLYN MCCLAY FP AC
118 POMPTON DRIVE 56 56 83
FAYETTEVILLE 28304 919 424-6104
U OF IOWA

RUCKER, TINSLEY WHITE FP AC
1307 AVON ST.
FAYETTEVILLE 28304 919 323-1718

SANDERSON, WM. EARL FP AC
2175 VILLAGE DR. 84 85 87
FAYETTEVILLE 28305 919 483-7565
U OF NC

SHEN, SUNG FAN FP AC
2414 HOPE MILLS ROAD 66 72 78
FAYETTEVILLE 28304 919 424-2426
TAIWAN U-TAIPEI

WETTER, JAMES MICHAEL FP AC
1601-B OWEN DRIVE 74 78 79
FAYETTEVILLE 28306 919 323-1152
ST U OF NY-BUFF

WILLIS, ROBERT FREDERICK FP L
204 S. MAIN STREET 51 52 52
HOPE MILL 28348 919 424-6644
MED COLL OF VA

WOODWORTH, THOMAS BELL FP /OM AC
1657 OWEN DRIVE 69 71 75
FAYETTEVILLE 28304 919 484-6540
U OF MICHIGAN

WORDEN, NEIL ASHTON FP AC
PO BOX 529 51 51 55
HOPE MILLS 28348 919 483-0463
U OF LOUISVILLE

ASTROENTEROLOGY

HOWILER, WILLIAM EDWARD, JR. GE AC
1778 METROMEDICAL DRIVE 70 73 77
FAYETTEVILLE 28304 919 323-5203
MED U OF SC

JONES, J. WESLEY GE /IM AC
1309 MEDICAL DR., STE. 102 76 76 84
FAYETTEVILLE 28304 919 323-2477
DUKE

GENERAL SURGERY

BEYER, ALFRED JAMES GS AC
521 BEAUMONT ROAD 67 67 82
FAYETTEVILLE 28304 919 483-5031
CASE WESTERN RES

CAMPBELL, FRANK HIGHSMITH GS /TS AC
P. O. BOX 53651 46 50 56
FAYETTEVILLE 28305 919 485-6161
DUKE

CHAUDHURI, DEBI PRASAD GS AC
1617 OWEN DRIVE 62 71 77
FAYETTEVILLE 28304 919 323-0101
NILRATAN COLL

CLARK, FRANKLIN ST. CLAIR GS /CDS AC
PO BOX 53394 73 73 79
FAYETTEVILLE 28305 919 323-2626
U OF NC

DE BOER, JOHN L. GS AC
521 BEAUMONT RD. 71 73 88
FAYETTEVILLE 28304 919 483-5031
U OF VERMONT

DIETRICK, RONALD BURTON GS /TS C
VA MEDICAL CENTER 53 53 85
RAMSEY ST.
FAYETTEVILLE 28304 919 488-2120
U OF PENN

FAILLACE, DEON F. GS AC
1790 METROMEDICAL DR. 76 79 88
FAYETTEVILLE 28304 919 323-2626
U OF MICHIGAN

LANGLEY, JOHN R. GS /VS AC
3616 CAPE CENTER DR., STE. A 68 68 87
FAYETTEVILLE 28304
MED U OF SC

NEWMAN, WILLIAM HAROLD GS /TS RT
1205 LONGLEAF DR. 56 56 65
FAYETTEVILLE 28305 919 485-6464
BOWMAN GRAY

PAUL, FRANKLIN ARTHUR GS /VS AC
6834 TOWBRIDGE ROAD 58 59 84
FAYETTEVILLE 28306 919 424-1501
HAHNEMANN

SALIBA, CONSTANTIN GS AC
3318 MELROSE ROAD 50 50 71
FAYETTEVILLE 28304 919 323-0280
U OF ST JOSEPH

STEFFES, BRUCE CARL GS AC
1790 METROMEDICAL DR. 76 76 83
FAYETTEVILLE 28304 919 323-2626
U OF MICHIGAN

THOMAS, JAMES M. GS AC
1790 METROMEDICAL DR. 67 70 88
FAYETTEVILLE 28304 919 323-2626
U OF FLORIDA

GYNECOLOGY

GARBER, EDGAR CLYDE, JR. GYN L/RT
1810 LAKE SHORE DR. 44 47 50
FAYETTEVILLE 28305 919 484-6474
MED COLL OF VA

SNIPES, RICHARD DEAN GYN L
P. O. BOX 53514 42 45 46
FAYETTEVILLE 28305 919 485-1191
DUKE

HEMATOLOGY

MEHTA, VIJAYKUMAR B. HEM /ON AC
518 SANDHURST DR. 57 71 75
FAYETTEVILLE 28304 919 323-4091
BARODA U

HAND SURGERY

CLARK, LOUIS PHILLIP, JR. HS /ORS AC
1300 MEDICAL DR. 70 71 84
FAYETTEVILLE 28304 919 484-2171
MEHARRY MED COLL

INTERNAL MEDICINE

DEVASTHALI, SHIRISH DHONDU IM /HEM AC
PO BOX 58097 80 84 90
FAYETTEVILLE 28305 919 483-8586
MOSCOW MED. INST

ELLENBOGEN, CHARLES IM /ID AC
1601-B OWEN DRIVE 64 69 81
FAYETTEVILLE 28304 919 323-1152
U OF CHICAGO

FLEISHMAN, MALCOLM IM /CD AC
P. O. BOX 35126 54 54 59
FAYETTEVILLE 28303 919 484-0144
U OF NC

HAAS-WESTON, CARLOS FIACRO IM AC
3629 CAPE CENTER DR. 59 85 91
FAYETTEVILLE 28304 919 323-8335
GUATEMALA U

IZURIETA, HENRY IM AC
514 BEAUMONT ROAD 61 71 72
FAYETTEVILLE 28304 919 485-8831
U OF MADRID

JOHNSEN, LYNN IM L/RT
325 N. COOL SPRING ST.,APT.504 43 48 49
FAYETTEVILLE 28301 919 484-6080
U OF WISCONSIN

JORDAN, WELDON HUSKE IM AC
114 BROADFOOT AVENUE 47 47 55
FAYETTEVILLE 28305 919 484-3261
HARVARD

LOGUE, STEPHEN STUART IM AC
1766 METROMEDICAL DR. 79 82 84
FAYETTEVILLE 28304 919 483-8080
U OF NC

MCFADYEN, OSCAR LEE, JR. IM L/RT
524 VALLEY ROAD 40 41 42
FAYETTEVILLE 28305 919 484-0221
DUKE

MELTON, GWENESTA BARNUM IM /RHU AC
1756 METROMEDICAL DR. 79 79 90
FAYETTEVILLE 28304 919 323-1322
TULANE U

†MILLER, HORACE WILLIAM, JR. IM /CD
1766 METROMEDICAL DR. 51 51 53
DECEASED--11-20-90
FAYETTEVILLE 28304 919 483 -7090
BOWMAN GRAY

MURTUZA, SARWAR IM /FP C
USAF CLINIC 76 76 90
POPE AFB 28308 919 394-2288
OSMANIA MED COLL

POPIO, KENNETH ANGELO IM /CD AC
1314 MEDICAL DR. #102 66 66 89
FAYETTEVILLE 28304 919 323-6151
COLUMBIA U

RANDOLPH, MICHAEL ANTHONY IM AC
1001 NEW MARKET CT. 85 89 90
FAYETTEVILLE 28314 919 432-8202
GEO WASHINGTON U

REAVES, LEONARD ERATUS, III IM /GE M
2841 SKYE DR. 61 61 78
FAYETTEVILLE 28303 919 868-5166
U OF NC

RIVERS, RUEBEN NORMAN IM AC
1738 METROMEDICAL DRIVE 78 82 84
FAYETTEVILLE 28304 919 323-2503
DUKE

STEWART, ALBERT, JR. IM L
114 BROADFOOT AVENUE 44 48 50
FAYETTEVILLE 28305 919 484-3365
WASHINGTON U

STEWART, DAVID DUBOSE IM AC
114 BROADFOOT AVE. 82 82 85
FAYETTEVILLE 28305 919 484-1156
MED U OF SC

WHETSELL, DOUGLAS WAYNE IM /PUD AC
1756 METROMEDICAL DR. 68 68 85
FAYETTEVILLE 28304 919 323-1322
MED U OF SC

WRIGHT, EUGENE EDWARD, JR. IM AC
1738 METROMEDICAL DR. 78 79 82
FAYETTEVILLE 28304 919 323-2503
DUKE

NEUROLOGY

CHIPMAN, MARTIN N AC
1262 OLIVER ST. 60 60 87
FAYETTEVILLE 28304 919 484-5151
BAYLOR

SERANO, RICHARD D. N C
1289 OLIVER ST. 73 75 90
FAYETTEVILLE 28304 919 483-9200
U OF VIRGINIA

STOWE, FRED REECE, JR. N /CHN AC
3314 MELROSE RD., STE. 102 58 58 77
FAYETTEVILLE 28304 919 484-7405
U OF NC

TRAN, LUCAS VAN N AC
101 ROBESON ST., STE. 304 76 83 86
FAYETTEVILLE 28301 919 323-1016
SAIGON U

NEPHROLOGY

LOHAVICHAN, CHOOMSANG NEP /IM AC
PO BOX 42736 65 65 74
FAYETTEVILLE 28304 919 323-1315
SIRIRAJ HOSP U

MELTON, KENNETH NEP /IM AC
PO BOX 42736 78 78 89
FAYETTEVILLE 28304 919 484-8114
TULANE U

26. CUMBERLAND COMPONENT SOCIETY (Continued)

WEBB, ROBERT KENT NEP /IM AC
PO BOX 42736 67 73 76
FAYETTEVILLE 28304 919 484-8114
WEST VA U

NEONATAL-PERINATAL MEDICINE

CISZEK, THOMAS ARTHUR NPM /PD AC
PO BOX 2000 77 78 86
FAYETTEVILLE 28302 919 323-6762
ST LOUIS U

NEUROLOGICAL SURGERY

ATASSI, INAD BADREDDIN NS AC
101 ROBESON ST. STE. 410 72 75 81
FAYETTEVILLE 28301 919 483-5050
DAMASCUS U

GHOSTINE, SALIM Y. NS AC
1665 OWEN DR. 58 58 88
FAYETTEVILLE 28304 919 484-1447
U OF MONTPELLIER

KERANEN, VICTOR JOSEPH NS AC
3314 MELROSE ROAD, SUITE 104 64 64 71
FAYETTEVILLE 28304 919 484-9802
DUKE

PENNINK, MENNO NS AC
3314 MELROSE RD. STE. 103 65 74 75
FAYETTEVILLE 28304 919 323-0475
U OF AMSTERDAM

PRITCHARD, WILLIAM LEE NS AC
1309 MEDICAL DR. #101 56 56 63
FAYETTEVILLE 28304
JOHNS HOPKINS

WADON, CAROL M. NS C
3314 MELROSE RD. 83 88 90
FAYETTEVILLE 28307 919 484-0693
ALBANY MED COLL

OBSTETRICS AND GYNECOLOGY

ALLEYNE, GRANT LIVINGSTONE OBG AC
P. O. BOX 64838 70 74 77
FAYETTEVILLE 28306 919 323-2767
U OF WEST INDIES

BAGGETT, JOSEPH WOODROW OBG L/RT
P. O. BOX 53514 45 45 51
FAYETTEVILLE 28305 919 485-1837
U OF MARYLAND

DANIEL, CROWELL TURNER, JR. OBG L/RT
1914 WINTERLOCHEN RD. 48 48 59
FAYETTEVILLE 28305 919 484-9472
MED COLL OF VA

GARDNER, FRANCIS SIDNEY, JR. OBG AC
1219 WALTER REED ROAD 51 51 61
FAYETTEVILLE 28314 919 323-2103
U OF MARYLAND

GESZLER, GERIANNE OBG AC
2404 ROLLING HILL RD. 85 00 82
FAYETTEVILLE 28304 919 323-8724
DUKE

GOODING, STEPHEN C. OBG AC
1641 OWEN DR. 65 65 89
FAYETTEVILLE 28304 919 484-6474
BOWMAN GRAY

HAITHCOCK, WILLIAM DANA, JR. OBG AC
1219 WALTER REED ROAD 73 77 80
FAYETTEVILLE 28304 919 323-2103
MED U OF SC

HARDISON, JOE WILLIAM OBG /GE AC
1320 MEDICAL DRIVE 65 65 72
FAYETTEVILLE 28304 919 323-3301
U OF NC

HARMON, PERRY MONROE OBG AC
3613 CAPE CENTER DR. 74 75 82
FAYETTEVILLE 28304 919 483-6677
U OF NC

HAYES, BENNETT ALLEN, JR. OBG AC
1219 WALTER REED ROAD 57 57 65
FAYETTEVILLE 28304 919 323-2103
U OF NC

JIAMACHELLO, NICHOLAS OBG RT
307 SYLVAN ROAD 58 58 71
FAYETTEVILLE 28305 919 485-8729
U OF PENN

JORDAN, STUART HARRINGTON OBG AC
1320 MEDICAL DR. 85 87 90
FAYETTEVILLE 28304 919 323-3301
U OF NC

KEENEY, GLENWARD THOMAS OBG AC
1219 WALTER REED ROAD 67 67 77
FAYETTEVILLE 28304 919 323-2103
MED COLL OF VA

KIM, WILLIAM NO CHUN OBG /OM RT
1317 MEDICAL DR. STE. #3 52 52 82
FAYETTEVILLE 28304 919 323-3890
LOMA LINDA U

MCALISTER, LINDA THERESA OBG AC
511 OWEN DR. 78 80 85
FAYETTEVILLE 28304 919 485-1191
U OF CALIFORNIA

MCDANIEL, JACK PASCHAL OBG AC
1320 MEDICAL DRIVE 56 56 64
FAYETTEVILLE 28304 919 323-3301
U OF NC

MORRISON, ROBERT HOLCOMBE OBG L/RT
331 FAIRFIELD RD. 44 44 55
FAYETTEVILLE 28303 919 867-1044
U OF VIRGINIA

PATOW, WARREN EDWARD OBG AC
1601-B OWEN DR. 47 48 85
FAYETTEVILLE 28304 919 323-1152
M C OF WISCONSIN

SANTORIELLO, KATHY ANN OBG AC
3613 CAPE CENTER DR. 84 85 89
FAYETTEVILLE 28304 919 483-6677
DUKE

STRICKLAND, MYRON S. OBG AC
1219 WALTER REED RD. 84 85 88
FAYETTEVILLE 28304 919 323-2103
EAST CAROLINA U

VIETA, PAUL ANTHONY OBG AC
911 HAY ST. 66 67 76
PO BOX 53514
FAYETTEVILLE 28305 919 485-1191
MED SCH-UMDNJ

WAHBEH, CAMILLE JAMIL OBG AC
3621 CAPE CENTER DR. 77 81 84
FAYETTEVILLE 28304 919 323-4155
AMER.U OF BEIRUT

WALLS, BERTRAM EMMANUEL OBG AC
3621 CAPE CENTER DR. 76 76 82
FAYETTEVILLE 28304 919 323-4155
DUKE

ONCOLOGY

BAKRI, KAMAL MANUBHAI ON /IM AC
P. O. BOX 42935 72 78 85
FAYETTEVILLE 28309 919 323-6910
BARODA U

OPHTHALMOLOGY

COPELAND, GARY BENJAMIN OPH AC
1629 OWEN DRIVE 60 60 67
FAYETTEVILLE 28304 919 484-6141
BOWMAN GRAY

LEVI, GEORGE ALBERT OPH L/RT
2311 ROLLINGHILL RD. 50 50 58
FAYETTEVILLE 28304 919 484-6144
MED U OF SC

MCLESTER, WILLIAM DUMAS OPH /PTH AC
1635 OWEN DR. #A 65 65 71
FAYETTEVILLE 28304 919 323-2002
U OF NC

RITCHEY, JOHN PHILLIP OPH AC
6816 UPPINGHAM ROAD 65 65 77
FAYETTEVILLE 28306 919 484-6141
U OF OREGON

SAPPENFIELD, LUTHER COOK, JR. OPH AC
1629 OWEN DRIVE 57 57 65
FAYETTEVILLE 28304 919 484-6141
DUKE

STAPLETON, SYDNEY SCOTT OPH AC
101 ROBESON ST., STE. 407 80 81 84
FAYETTEVILLE 28301 919 483-2117
U OF NC

ORTHOPEDIC SURGERY

GILBERT, STANLEY KEITH, JR. ORS /HS AC
1300 MEDICAL DRIVE 75 78 82
FAYETTEVILLE 28304 919 484-2171
U OF VIRGINIA

JOHNSON, JAMES ERWIN ORS AC
3308 MELROSE ROAD 69 70 79
FAYETTEVILLE 28304 919 484-4874
U OF MINN

KOUBA, STEPHEN HOWARD ORS AC
1300 MEDICAL DRIVE 80 00 90
FAYETTEVILLE 28305 919 484-3332
GEORGETOWN U

LOGEL, ROBERT JOHN ORS AC
3308 MELROSE ROAD 72 72 77
FAYETTEVILLE 28305 919 484-3114
U OF MISSOURI

MEEK, JOE BERNARD ORS AC
1300 MEDICAL DRIVE 64 64 73
FAYETTEVILLE 28304 919 484-2171
MED U OF SC

SIEWERS, CHRISTIAN FOGLE ORS /PM L/RT
1605 HATHERLEIGH DR. 44 50 50
FAYETTEVILLE 28304 919 484-4140
MED COLL OF VA

OTOLARYNGOLOGY

BUTLER, CAREY JONES OTO /OT AC
516 OWEN DRIVE 52 52 54
FAYETTEVILLE 28304 919 485-6101
MED COLL OF VA

HAIR, GLENN EDGAR OT /OTO AC
3314 MELROSE ROAD 59 59 65
FAYETTEVILLE 28304 919 323-1463
U OF NC

HENLEY, JOHN T., JR. OTO AC
3314 MELROSE RD., STE. 100 72 72 81
FAYETTEVILLE 28304 919 323-1463
U OF NC

PANTELAKOS, CONSTANTINE G. OTO AC
1653 OWEN DRIVE 57 57 64
FAYETTEVILLE 28304 919 484-5108
DUKE

PSYCHIATRY

CRUMMIE, ROBERT GWINN P /ALD AC
1500 BRAGG BLVD. 65 64 69
PO BOX 35436
FAYETTEVILLE 28303 919 484-3304
DUKE

DALY, LIAM N. P /FPY AC
1262 OLIVER ST. 60 67 69
FAYETTEVILLE 28304 919 484-5151
U OF DUBLIN

FLEISHMAN, STEPHEN BAER P /CHP AC
2619 TORCROSS DR. 74 76 76
CUMBERLAND MENTAL HEALTH DEPT.
FAYETTEVILLE 28304 919 323-0601
U OF MARYLAND

GOMEZ, RAUL FERNANDO P AC
3415 MELROSE RD. #A 67 67 74
FAYETTEVILLE 28304 919 484-9634
U OF CALDAS

MARCOTTE, DAVID BACON P AC
1262 OLIVER ST. 63 63 82
FAYETTEVILLE 28304 919 484-5151
CORNELL U

MCILWAIN, THOMAS P. P AC
1262 OLIVER ST. 75 77 80
FAYETTEVILLE 28304 919 484-5151
MED U OF SC

MEYMANDI, ASSAD P /N AC
1212 WALTER REED ROAD 62 66 67
FAYETTEVILLE 28304 919 485-6166
GEO WASHINGTON U

26. CUMBERLAND COMPONENT SOCIETY (Continued)

ITCHELL, NEIL PATRICK P AC 61 61 90
1285 OLIVER ST.
FAYETTEVILLE 28304 919 484-4126
NAT U OF IRELAND

ORESS, RALPH LOUIS P AC 59 60 75
P. O. BOX 2068
FAYETTEVILLE 28302 919 323-0601
CORNELL U

ORROW, JERRY F. P AC 63 63 90
CUMBERLAND HOSPITAL
FAYETTEVILLE 28309 919 485-7181
U OF OKLAHOMA

DIATRICS

EYER, CATHERINE HERLIHY PD AC 67 67 85
1213 WALTER REED ROAD
FAYETTEVILLE 28305
CASE WESTERN RES

UENCA, NELIDA ALBA PD /PH AC 57 57 75
6748-B IRON GATE DR.
FAYETTEVILLE 28306
U OF CORDOBA

IMESH, JOHN SIGMUND PD AC 54 61 82
3415-C MELROSE ROAD
FAYETTEVILLE 28304 919 484-8163
U OF BUDAPEST

ALL, JAMES SAMUEL PD AC 57 57 62
3415-C MELROSE ROAD
FAYETTEVILLE 28304 919 484-8163
DUKE

ARRIS, LARRY COLEMAN PD AC 77 78 81
P. O. BOX 40405
FAYETTEVILLE 28309 919 323-4281
DUKE

ARTNESS, ALVIN HUNTER PD AC 65 65 76
PO BOX 43505
FAYETTEVILLE 28309 919 323-4571
BOWMAN GRAY

EMASTER, PIERRE CLIFFORD PD AC 71 75 78
1291 OLIVER STREET
FAYETTEVILLE 28304 919 483-2646
U OF FLORIDA

OUGHLIN, HOWARD HOPKINS PD AC 70 74 76
1213 WALTER REED ROAD
FAYETTEVILLE 28304 919 484-6121
U OF PENN

ICCUTCHEN, THOMAS M.,JR. PD AC 63 68 69
1213 WALTER REED ROAD
FAYETTEVILLE 28304 919 484-6121
VANDERBILT U

OLLARD, JOHN CHRISTOPHER PD AC 68 68 75
1213 WALTER REED DRIVE
FAYETTEVILLE 28304 919 484-6121
U OF VIRGINIA

OWELL, WILLIAM CARLYLE PD AC 52 52 58
P. O. BOX 53127
FAYETTEVILLE 28305 919 484-3121
BOWMAN GRAY

SHAW, FRANK STEDMAN PD /PDA AC 59 59 66
P. O. BOX 53127
FAYETTEVILLE 28305 919 484-3121
U OF PENN

PHYSICAL MEDICINE AND REHABILITATION

WALSH, ZANE THOMAS, JR. PM AC 86 87 85
2810 HUNTINGTON RD.
FAYETTEVILLE 28303 919 484-3436
EAST CAROLINA U

ZELLNER, ERIC G. B. PM AC 81 82 86
PO BOX 64614
FAYETTEVILLE 28306 919 323-6036
U OF MONTERREY

PLASTIC SURGERY

BRIGGS, JOHN GLENN, JR. PS AC 69 69 78
1774 METRO MEDICAL DR.
FAYETTEVILLE 28304 919 323-1203
U OF NC

MILLER, HORACE WM. MARK, IV PS AC 82 83 83
117 MAGNOLIA AVE.
FAYETTEVILLE 28305 919 323-1203
U OF NC

PATHOLOGY, ANATOMICAL AND CLINICAL

LUTMAN, GEORGE BENTON PTH AC 64 64 74
P. O. BOX 2000
FAYETTEVILLE 28302 919 323-6149
U OF MISSOURI

WEAVER, ROY ALBERT PTH AC 63 63 71
CAPE FEAR HOSPITAL
PO BOX 2000
FAYETTEVILLE 28302 919 323-6149
U OF NC

WELLS, CHARLES LEWIS PTH AC 59 60 70
CAPE FEAR VALLEY MED. CTR.
PO BOX 2000
FAYETTEVILLE 28302 919 323-6149
U OF PITTSBURGH

RADIOLOGY

ALLISON, DAVID JAMES R AC 82 83 89
221 RIVENOAK DR.
FAYETTEVILLE 28303 919 323-2012
WEST VA U

BALLENTINE, KINCHEN WHITAKER R AC 67 67 77
486 WINDWOOD ON SKYE
FAYETTEVILLE 28305 919 323-2012
U OF TENNESSEE

BATTEN, HUBERT ELMORE R AC 51 53 53
2121 RAEFORD RD.
FAYETTEVILLE 28305 919 323-2012
MED COLL OF VA

DAVIS-SANDERS, BEVERLY ANN R AC 71 71 90
605 LEVENHALL DR.
FAYETTEVILLE 28303 919 323-2012
HOWARD U

FISHER, DAVID RUSSELL R AC 79 85 89
127 THORNCLIFF DR.
FAYETTEVILLE 28305 919 323-2012
U OF NEW MEXICO

MACRAE, JOHN DONALD R L/RT 27 28 30
700 MEASE PLAZA, APT. 850
DUNEDIN, FL 34698 813 733-1161
U OF PENN

MILLER, WILLIAM CAREY, JR. R AC 58 58 69
1653 BANBURY DRIVE
FAYETTEVILLE 28304 919 484-6881
MED U OF SC

MORADIAN, GLENN PETER R C 83 84 90
1329 ROBESON ST.
FAYETTEVILLE 28304 919 323-2012
U OF NC

OLACK, JEROME A. R AC 67 68 79
616 RAVENCROFT
FAYETTEVILLE 28314 919 822-7069
TEMPLE U

THERAPEUTIC RADIOLOGY

BRYAN, JOHN HUGH TR /PHO AC 69 69 83
DEPT. OF RADIATION ONCOLOGY
BOX 41208, CAPE FEAR MED. CTR.
FAYETTEVILLE 28304 919 323-6690
U OF NC

UROLOGICAL SURGERY

APPEL, ROBERT ALBERT U AC 81 82 90
1786 METROMEDICAL DR.
FAYETTEVILLE 28304 919 485-8151
U OF VIRGINIA

HOFFMAN, CHARLES ANTHONY, JR. U AC 54 54 66
513 OWEN DRIVE
FAYETTEVILLE 28304 919 485-8801
MED COLL OF VA

HURDLE, THOMAS GRAY U L 45 45 55
1786 METROMEDICAL DR.
FAYETTEVILLE 28304 919 485-8151
MED COLL OF VA

JORDAN, WILLIAM RAND U AC 70 70 79
2008 LITHO PLACE
FAYETTEVILLE 28304 919 485-8871
U OF NC

PARFITT, HENRY E., JR. U AC 75 76 83
1786 METROMEDICAL DR.
FAYETTEVILLE 28303 919 485-8151
U OF NC

ROCHMAN, STEPHEN CHARLES U AC 70 71 78
513 OWEN DRIVE
FAYETTEVILLE 28304 919 485-8801
MEHARRY MED COLL

29. DAVIDSON COMPONENT SOCIETY

OFFICERS—**President:** John J. McKinney, Jr., D.O., 1632 National Highway, Thomasville 27360 (919 885-7311)
Secretary: James F. Black, M.D., 200 Carolina Ave., Lexington 27292 (704 243-3034)
Executive Secretary: Kay K. Saintsing, PO Box 1444, Lexington 27293 (704 956-2952)

O SPECIALTY LISTED

REID, JAMES EDWARD, JR. AC 82 87 80
103 W. 6TH AVE.
LEXINGTON 27292
EAST CAROLINA U

NESTHESIOLOGY

PLUMMER, CHARLES WAYNE AN AC 78 81 85
50 E. MAIN ST., STE. 111
THOMASVILLE 27360 919 472-2000
DUKE

CARDIOVASCULAR DISEASES

YELTON, BLANE WESLEY, JR. CD AC 71 71 82
1642 NATIONAL HIGHWAY
THOMASVILLE 27360 919 889-6802
U OF NC

DIAGNOSTIC RADIOLOGY

BRODER, MICHAEL SYLVAN DR AC 69 70 80
PO BOX 789
THOMASVILLE 27360 919 472-2000
ALBERT EINSTEIN

FAMILY PRACTICE

BOSKEN, DONALD WILLIAM FP AC 74 74 78
1120 RANDOLPH RD., STE. 16
THOMASVILLE 27360 919 475-7163
U OF KANSAS

CABRAL, DEBORAH BARBARA FP AC 80 82 85
208-B W. CENTER ST.
LEXINGTON 27292 704 249-2921
ST U OF NY-BUFF

CRAVEN, NICHOLAS SCOTT FP /P AC 62 62 78
123 EASTSIDE DR.
LEXINGTON 27292 704 246-2253
DUKE

29. DAVIDSON COMPONENT SOCIETY (Continued)

FUTRELL, THOMAS MILTON FP AC
201 W. HOLLY HILL ROAD 80 81 84
THOMASVILLE 27360 919 475-9164
TEMPLE U

MEYER, PAUL FREDRICK FP AC
10 MEDICAL PARK DR., STE. 2 78 79 90
LEXINGTON 27292 704 249-3329
U OF NEBRASKA

PHILLIPS, MARVIN WORTH FP AC
P. O. BOX 367 45 45 49
THOMASVILLE 27360 919 472-7262
MED COLL OF VA

STRADER, EUGENE RAY FP AC
901 E. CENTER STREET 56 56 58
LEXINGTON 27292 704 249-1200
BOWMAN GRAY

STRADER, HUNTER GORDON, JR. FP AC
2 CHERRY STREET 58 58 63
LEXINGTON 27292 704 249-9626
DUKE

TEAM, ROBERT ALSTON FP AC
2 CHERRY STREET 52 52 57
LEXINGTON 27292 704 246-4539
BOWMAN GRAY

TOLLIVER, JAMES BERT FP AC
510-A TURNER STREET 60 61 76
THOMASVILLE 27360 919 475-9171
U OF LOUISVILLE

WEISER, MARK ROBERT FP AC
10 MEDICAL PARK DR. 83 87 90
LEXINGTON 27292 704 249-2791
WEST VA U

WELBORN, JAMES TODD FP S/RT
17 E. SECOND AVENUE 48 48 50
LEXINGTON 27292 704 246-5625
U OF MARYLAND

GENERAL PRACTICE

MOCK, DAVID CARLTON GP L/RT
PO BOX 583, RT. #3 46 46 50
LEXINGTON 27292 704 787-4492
BOWMAN GRAY

REDWINE, JAMES DANIEL GP L/RT
6 WILLIAMS CIRCLE 31 31 34
LEXINGTON 27292 704 246-2658
EMORY U

SNIDER, BOBBY EUGENE GP AC
206-B W. CENTER ST. 53 54 54
LEXINGTON 27292 704 246-4212
BOWMAN GRAY

GENERAL SURGERY

CITRIN, KERRY ALAN GS AC
105 PINEYWOOD ROAD 70 75 78
P. O. BOX 1187
THOMASVILLE 27360 919 475-7148
HAHNEMANN

DEANG, CEDRIC RODRIGUEZ GS AC
1300 LEXINGTON AVENUE 63 74 78
THOMASVILLE 27360 919 475-2376
FAR EASTERN U

MANDEL, DALE MASON GS /TRS AC
105 PINEYWOOD RD. BOX 1187 77 80 85
THOMASVILLE 27360 919 475-7148
U OF BOLOGNA

PETERSEN, KENNETH MICHAEL GS /CDS AC
4 MEDICAL PARK DR. 74 74 81
LEXINGTON 27292 704 246-2487
DOWNSTATE ME CTR

UPPIN, A. S. GS AC
400 E. CENTER STREET 61 62 73
LEXINGTON 27292 704 249-2991
BARODA U

YORK, SHELLEY CLYDE, JR. GS AC
1300 LEXINGTON AVENUE 51 52 59
THOMASVILLE 27360 919 475-2376
U OF MARYLAND

INTERNAL MEDICINE

ALEXANDER, H. ANTHONY IM AC
1632 NATIONAL HIGHWAY 85 86 82
THOMASVILLE 27360 919 885-7311
BOWMAN GRAY

ARNOLD, TERRY VINCENT IM AC
13 MEDICAL PARK DR. 73 74 80
LEXINGTON 27292 704 249-7051
OHIO STATE U

BLACKWELL, OSCAR MOORE, III IM /BE AC
309 PINEYWOOD ROAD 74 75 78
THOMASVILLE 27360 919 475-8121
EMORY U

BYRNES, THOMAS HENDERSON,JR. IM /CD AC
309 PINEYWOOD ROAD 63 63 71
THOMASVILLE 27360 919 475-8121
DUKE

FEDDER, MARC IM /ID AC
208-C W. CENTER ST. 75 79 84
P. O. BOX 557
LEXINGTON 27292 704 249-4296
AUTONOMA UNIV

HIGHSMITH, GEORGE PERRY IM AC
309 PINEYWOOD ROAD 46 46 50
THOMASVILLE 27360 919 475-8121
BOWMAN GRAY

HUNTER, JAMES EDWARD IM /CD AC
309 PINEYWOOD RD. 62 62 69
THOMASVILLE 27360 919 475-8121
CASE WESTERN RES

MCKINNEY, JOHN J., JR. IM AC
PIEDMONT INTERNAL MED. PA 83 85 89
1632 NATIONAL HIGHWAY
THOMASVILLE 27360 919 885-7311
U MED NJ

OLSON, BEVERLY IM /EM AC
PO BOX 306 71 73 78
CLIMAX 27233 919 274-2648
U OF BOLOGNA

SMITH, DAVID CLARK IM L/RT
102 WESTOVER DRIVE 43 44 48
LEXINGTON 27292 704 246-2929
BOWMAN GRAY

VOLKMER, DONALD DURHAM IM AC
OLD 29-70 SOUTH 72 79 84
P. O. BOX 579
LEXINGTON 27292 704 249-7785
NORTHWESTERN U

NEUROLOGICAL SURGERY

AMUNDSON, RUSSELL HENRY NS AC
100 HOSPITAL DR. 82 87 89
LEXINGTON 27292 704 246-8083
DOWNSTATE ME CTR

OBSTETRICS AND GYNECOLOGY

BLACK, JAMES FRANKLIN OBG AC
200 CAROLINA AVE. 75 75 75
LEXINGTON 27292 704 243-2431
U OF NC

DACUS, ROBERT MABRY, III OBG AC
1302 LEXINGTON AVENUE 65 65 71
THOMASVILLE 27360 919 475-6139
BOWMAN GRAY

DORTON, PHILLIP KEVIN OBG AC
1302 LEXINGTON AVE. 80 81 84
THOMASVILLE 27360 919 475-6139
U OF NC

HARRIS, SAMUEL RANCHOR OBG AC
7 MEDICAL PARK DRIVE 68 68 75
LEXINGTON 27292 704 243-2431
U OF NC

HEDGPETH, JOSEPH ROWLAND OBG AC
1302 LEXINGTON AVENUE 66 66 73
THOMASVILLE 27360 919 475-6139
BOWMAN GRAY

KIRSCH, CARL RICHARD OBG AC
1302 LEXINGTON AVE. 84 87 89
THOMASVILLE 27360 919 475-2166
U OF ALABAMA

LOHR, LLOYD DERMOT OBG AC
7 MEDICAL PARK DRIVE 61 61 69
LEXINGTON 27292 704 243-2431
U OF NC

OPHTHALMOLOGY

LENAHAN, DEBORAH SMITHERMAN OPH AC
2 HOSPITAL DR. 78 79 8
LEXINGTON 27292 704 243-243
U OF ALABAMA

SLYMAN, JAMES FRANCIS OPH AC
2 HOSPITAL DR. 77 78 8
LEXINGTON 27292 704 243-243
BOWMAN GRAY

ORTHOPEDIC SURGERY

BOLSTAD, KARL EDWARD ORS AC
14 MEDICAL PARK DR. 72 73 8
LEXINGTON 27292 704 249-297
U OF MICHIGAN

BUSBY, WILLIAM JARVIS ORS AC
105 PINEYWOOD ROAD 70 72 8
THOMASVILLE 27360 919 475-814
U OF NC

KAMMIRE, GORDON C. ORS /SM AC
14 MEDICAL PARK DR. 83 84 8
LEXINGTON 27292 919 249-297
BOWMAN GRAY

OTOLARYNGOLOGY

PHILLIPS, MICHAEL J. OTO AC
10 MEDICAL PARK DR., STE. E 84 84 9
LEXINGTON 27292 704 249-355
LSU-SHREVEPORT

PEDIATRICS

BURKE, JAMES OTIS, JR. PD AC
8 MEDICAL PARK DRIVE 65 65 7
LEXINGTON 27292 704 249-491
U OF NC

GILLIAM, CHARLES FRANKLIN PD AC
200 ARTHUR DRIVE 52 52 5
THOMASVILLE 27360 919 475-234
U OF MARYLAND

HYLTON, JOEL WALTER PD AC
200 ARTHUR DR. 85 85 8
THOMASVILLE 27360 919 475-234
U OF NC

STEPP, HESTLEY DANARD PD AC
200 ARTHUR DRIVE 59 59 7
THOMASVILLE 27360 919 475-234
BOWMAN GRAY

SUTTLE, EVELYN AMY PD AC
244 FAIRVIEW DRIVE 78 81 8
LEXINGTON 27292 704 246-433
U OF TENNESSEE

THOMPSON, WILLIAM KEITH PD AC
200 ARTHUR DRIVE 69 69 7
THOMASVILLE 27360 919 475-234
BOWMAN GRAY

TIMBERLAKE, ROBERTS E., JR. PD AC
8 MEDICAL PARK DR. 87 89 9
LEXINGTON 27292 919 249-491
U OF VIRGINIA

WILLIAMS, DAVID ROBERT PD AC
200 ARTHUR DRIVE 63 63 6
THOMASVILLE 27360 919 475-234
U OF NC

PUBLIC HEALTH

LOHR, DERMOT PH L/R
20 VANCE CIRCLE 34 34 3
LEXINGTON 27292 704 246-262
JEFFERSON

RADIOLOGY

DIXON, DIRK STANCILL, SR. R AC
P. O. BOX 1532 65 65 8
LEXINGTON 27292 919 249-151
BOWMAN GRAY

HURST, DAVID MAURICE R /NM AC
1003 PINE NEEDLE LANE 62 62 6
THOMASVILLE 27360 919 475-305
U OF TENNESSEE

31. DUPLIN COMPONENT SOCIETY

)FFICERS—**President:** Corbett L. Quinn, M.D., PO Box 189, Magnolia 28453 (919 289-4165)
Secretary: Corazon Ngo, M.D., PO Box 538, Kenansville 28349
Executive Secretary: Alice Ross, PO Box 538, Kenansville 28349 (919 296-1811)

MILY PRACTICE

LAIR, JAMES SEABORN, JR. FP AC
400 E. MAIN STREET 47 47 50
WALLACE 28466 919 285-2134
U OF MARYLAND

OYETTE, EDWARD LEE FP /CD L
CHINQUAPIN 28521 54 54 56
BOWMAN GRAY 919 285-3481

ATE, CARL DANIEL, JR. FP AC
PO BOX 986 82 83 84
BEULAVILLE 28518 919 298-3125
U OF NC

UINN, CORBETT LATIMER FP /PH AC
112-116 N. R.R. ST. 53 53 55
MAGNOLIA 28453 919 289-4165
U OF MARYLAND

UINN, MARSHALL K. FP AC
PO BOX 189 83 83 83
MAGNOLIA 28453 919 289-4165
BOWMAN GRAY

UTTON, WILLIAM WAYNE FP AC
337 N. NORWOOD STREET 59 59 60
WALLACE 28466 919 285-2111
U OF NC

GENERAL PRACTICE

MATTHEWS, GEORGE POWERS GP L/RT
P. O. BOX 609 43 43 47
ROSE HILL 28458 919 289-2330
TEMPLE U

GENERAL SURGERY

GOUDARZI-LANGROUDI, M. KAMRAN GS/GP AC
219 E. MAIN ST. 78 78 88
WALLACE 28466 919 285-7942
U OF LONDON

INTERNAL MEDICINE

BECERRA, FRANCISCO IM AC
ROSE HILL MEDICAL CLINIC 61 62 90
ROSE HILL 28458 919 289-3030
NATL U COLOMBIA

NGO, CORAZON IM AC
PO BOX 538 65 65 74
KENANSVILLE 28349 919 296-1811
U OF SANTO TOMAS

POPE, SAMUEL A. IM L/RT
BEULAVILLE 28518 35 35 52
U OF PENN 919 298-3193

RICCI, DANIEL MICHAEL IM AC
205 E. MURPHY ST. 83 84 87
WALLACE 28466 919 285-4100
HAHNEMANN

OBSTETRICS AND GYNECOLOGY

AMMAR, MOHAMED IBRAHIM OBG AC
P. O. BOX 468 65 80 82
KENANSVILLE 28349 919 296-1666
U OF AIN SHAMS

PSYCHIATRY

WELLISH, CARL SHELDON P /LM AC
PO BOX 925 63 64 90
KENANSVILLE 28349 919 296-1758
DALHOUSIE U

32. DURHAM-ORANGE COMPONENT SOCIETY

)FFICERS—**President:** Evelyn Schmidt, M.D., 1301 Fayetteville St., Durham 27707 (919 683-1316)
Secretary: Abe Walston, M.D., PO Box 16999, Durham 27704 (919 477-6900)
Executive Secretary: Jerry H. Nance, 5913 Dickson Mill Rd., Durham 27705 (919 383-2602)

) SPECIALTY LISTED

ARON, MARK F. S
4604-A BYRD RD. 92 88
DURHAM 27705 919 382-3278
DUKE

HUJA, NITA S
311 S LASALLE ST. APT. 15-I 93 90
DURHAM 27705
DUKE

LSPAUGH, JAMES A., II S
601 HIBBARD DR. #C 91 87
CHAPEL HILL 27514 919 933-5793
DUKE

YMOND, JAMES KIRK R
BOX 3000, DUMC 86 86 90
DURHAM 27710 919 684-4202
LSU-SHREVEPORT

ATES, MICHAEL D. S
BOX 3287, DUMC 92 88
DURHAM 27710 919 489-1586
DUKE

EARER, ELIZABETH ANN R
7J RIVER BIRCH ROAD 90 00 90
DURHAM 27705 919 684-8111
U OF MIAMI

ENNETT, JOHN DIETER R
611 SNOWCREST TRAIL 90 90 91
DURHAM 27707 919 684-8111
U TX-SOU.WESTERN

LACKWELL, SAMUEL DWIGHT C
2431 CONDOR CT. 87 88 89
RALIEGH 27615 919 471-4921
U OF FLORIDA

OLICK, DEBBIE A. R
RT. #9, BOX 4 89 00 89
LYSTRA HILLS
CHAPEL HILL 27514 919 966-2127
U OF COLORADO

RAY, ANTHONY D. S
1729-D E. CORNWALLIS RD. 92 89
DURHAM 27713 919 544-6903
U OF NC

BRECHTELSBAUER, P. BRADLEY S
#6 HOLLAND DR. 91 88
CHAPEL HILL 27514 919 968-1961
U OF NC

BURTON, JOHN H. S
ONE MAPLE DR. 92 89
CHAPEL HILL 27514 919 967-9372
U OF NC

CHAMBERS, DAVID EARL R
3102 GREEN HILL DR. 86 88 89
CHAPEL HILL 27514 919 286-6951
U OF SOU ALA

CHESHIRE, WILLIAM P., JR. R
106-A WEATHERSTONE DR. 87 00 89
CHAPEL HILL 27514 919 966-2526
WEST VA U

COLEMAN, CLARENCE C., JR. S
810 DELANY DR. 93 90
RALEIGH 27610 919 821-5705
U OF NC

COUNDOURIOTIS, ANDREW R
1408 WASHINGTON ST. 87 00 85
DURHAM 27701 919 683-2785
DUKE

CRESSY, ELIZABETH D. S
106-B MISTY WOODS CIR. 92 89
CHAPEL HILL 27514 919 942-3401
U OF NC

CZOP, CAROL L. S
RT. #3, BOX 199-9 92 88
APEX 27502
U OF NC

DAILY, REBECCA SUSAN R
UNC, DEPT. OF CHILD PSYCHIATRY 86 90 90
CHAPEL HILL 27599 919 966-2127
U OF ALABAMA

DALTON, JAMES D., JR. R
15 MEADOWBROOK DR. 90 00 86
DURHAM 27712 919 684-8111
DUKE

DENNY, MARGARET ELIZABETH S
909 N. PEACE HAVEN RD. 91 90
WINSTON-SALEM 27104 919 765-2899
U OF NC

DETTERBECK, FRANK C. R
123 STATESIDE DR. 83 88 88
CHAPEL HILL 27514 919 966-3381
NORTHWESTERN U

DUSZAK, RICHARD, JR. R
2 HITCHING RACK CT. 89 90 91
DURHAM 27713 919 681-2711
PENN STATE U

EISNER, JONATHAN DAVID R
601 JONES FERRY RD., APT. H-4 89 00 90
CARRBORO 27510 919 966-4131
DOWNSTATE ME CTR

FLANNELLY, CHRISTINA MARIE R
108-D WEATHERSTONE DR. 88 88 91
CHAPEL HILL 27514 919 966-4131
DUKE

FOREHAND, BILLIE J. S
30 SPRING GARDEN APTS. 92 88
CHAPEL HILL 27514
U OF NC

FOWLER, VANCER GARRISON, II S
PO BOX 58246 93 90
FAYETTEVILLE 28305
U OF NC

FRANKLIN, SAMUEL C., JR. S
4026 CHAPRA DR. 91 88
WILMINGTON 28403 919 791-0484
U OF NC

FUCHS, HERBERT EDGAR R
4006 LIVINGSTONE PL. 84 90 91
DURHAM 27707 919 493-2705
DUKE

GANGAROSA, LISA M. S
1713 JAMES ST. 91 87
DURHAM 27707 919 493-9583
DUKE

GARRISS, GEORGE WALDON, III S
RT. #1, BOX 694-A 93 90
PITTSBORO 27312 919 933-5520
U OF NC

GELOT, DEEPAK R. S
E-20 RIDGEWOOD APTS. 91 88
404 JONES FERRY RD.
CARRBORO 27510 919 929-3248
U OF NC

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

GERKE, CALVIN GLENN, JR. S
3805-207 CHIMNEY RIDGE PL. 94 90
DURHAM 27713 919 419-0330
DUKE

GRAHAM, DOUGLAS K. S
624 HIBBARD DR. #C 92 88
CHAPEL HILL 27514
U OF NC

HABEL, DAVID CHRISTOPHER R
2511 HIGHLAND AVE. 88 00 85
DURHAM 27704 919 684-8111
U OF NC

HALE, LAURA POPE S
6512 CRAIG ROAD 91 84
DURHAM 27712 919 471-0865
DUKE

HAMILTON, BRIAN HUGH S
LAUREL RIDGE APTS. #32 91 88
HIGHWAY 54 BYPASS
CHAPEL HILL 27516 919 967-9462
U OF NC

HAMMES, STEPHEN R. S
622-R E. KNOX ST. 92 88
DURHAM 27701 919 684-8243
DUKE

HELWIG, JANE TIMBERLAKE S
PO BOX 3720 92 90
CHAPEL HILL 27515 919 929-3616
U OF NC

HERTZBERG, MICHAEL A. R
4 VANDORA PLACE 85 00 88
DURHAM 27705 919 684-8111
U OF NC

HILLSMAN, PHILIP LEE R
5505 REVERE RD. 87 88 90
DURHAM 27713 919 684-3812
U OF TENNESSEE

HOHNEKER, JOHN ARTHUR R
213 OLD FOREST CREEK DR. 85 89 90
CHAPEL HILL 27514 919 942-1737
RUTGERS MED SCH

JOHNSON, ANN RHAMY S
PO BOX 2395 91 87
CHAPEL HILL 27515 919 968-8850
U OF NC

JOHNSON, LAUREN PATRICIA S
1002 WILLOW DR. APT. #3 93 90
CHAPEL HILL 27514 919 967-2590
U OF NC

JOHNSON, MARGARET GOULD R
9504 GREENFIELD RD. 85 87 90
CHAPEL HILL 27516 919 942-4955
U OF NC

JOINES, JERRY DALE R
RT. #1, BOX 131 88 00 91
NEW HILL 27562
U OF NC

KANTOROWSKI, PAMELA A.G. S
2920 CHAPEL HILL RD., APT 30B 91 87
DURHAM 27707 919 493-9544
DUKE

KAVANAGH, BRIAN DENNIS R
BOX 3085, DUMC 88 90 91
DURHAM 27710 919 684-3742
TULANE U

KERAM, STEVAN R
316 SEVERIN ST. 88 90 90
CHAPEL HILL 27516 919 966-5711
U OF NC

KERNS, THOMAS C., JR. AC
1110 W. MAIN ST. 50 50 57
DURHAM 27701
DUKE

KING, VALERIE JEAN S
RT. #3, BOX 338 91 87
PITTSBORO 27312 919 542-2328
U OF NC

KIRKPATRICK, JOHN STEWART R
704 W. CORNWALLIS RD. 85 85 84
DURHAM 27707 919 493-6525
BOWMAN GRAY

KREGE, JOHN HENRY R
220 ELIZABETH ST., APT. A17 90-89
CHAPEL HILL 27515 919 966-4131
UNIV. OF NC

KRYSTAL, ANDREW DARRELL R
BOX 3812, DUMC 87 00 85
DURHAM 27710 919 684-8111
DUKE

LEE, ESTHER JOO S
705-B W. MAIN ST. 91 87
CARRBORO 27510 919 967-7722
U OF NC

LEE, PETER HOGYUN S
1521 E. FRANKLIN ST., B-210 94 90
CHAPEL HILL 27514 919 933-1113
U OF NC

LEVY, JILL RANDI S
4101 FIVE OAKS DR. #36 93 90
DURHAM 27707 919 490-0262
DUKE

LOGAN, WILLIAM C., JR. S
600 AUDUBON LAKE DR. 92 89
BLDG. #1, B-31
DURHAM 27713 919 544-7428
U OF NC

LURIE, SCOTT NORD R
1711 SHAWNEE ST. 87 88 85
DURHAM 27701 919 682-0582
DUKE

MAGARELLI, PAUL C. R
BOX 3495, DUMC 88 88 00
DURHAM 27710 919 688-3034
U. OF ARIZONA

MAGRINAT, GUSTAV CHARLES R
BOX 3206, DUMC 87 90 90
DURHAM 27710 919 684-8111
U OF NC

MANGEL, ALLEN WAYNE R
534 FINLEY ST. 88 88 88
DURHAM 27705 919 383-9730
GEORGETOWN U

MARGOLIS, PETER ADAM C
UNC, DIV. OF COMM. PEDIATRICS 80 83 88
WING D, CB #7225
CHAPEL HILL 27599 919 966-2504
NEW YORK U

MARTINEAU, SHEILA M. S
BOX 2793, DUMC 92 89
DURHAM 27710 919 967-0163
DUKE

MASON, JOHN CURRIE S
1224 COUNTRY CLUB RD. 92 89
WILMINGTON 28403 919 762-1520
U OF NC

MCDONNELL, CHARLES H., III R
910 CONSTITUTION DR. #419 86 00 87
DURHAM 27705 919 383-8369
JOHNS HOPKINS

MEYER, ANDREW HOYT R
7307-106 CALIBRE PARK DR. 89 00 89
DURHAM 27707 919 684-8111
BAYLOR

MINOGUE, MICHAEL F. S
213-A BRIDGEFIELD PL. 91 88
DURHAM 27705 919 383-7721
DUKE

MOORE, THOMAS ROBERT S
510 E. FRANKLIN ST. 92 89
CHAPEL HILL 27514 919 942-6406
U OF NC

NAGTEL, A. JACKSON, JR. R
104 BRADFORD PL. 86 88 88
CHAPEL HILL 27514 919 966-5711
U OF ALABAMA

NOECKER, ROBERT J. R
110 MELVILLE LOOP APT. 17 90 00 87
CHAPEL HILL 27514 919 933-6668
U OF NC

OTLEY, CLARK C. S
223-A W. WOODRIDGE DR. 91 87
DURHAM 27707 919 490-0199
DUKE

OVERCASH, WILLIAM TODD R
PO BOX 1343 88 00 84
ALBEMARLE 28002 704 982-8650
U OF NC

PASSANNANTE, ANTHONY N. R
DEPT. OF ANES. CB 7010 85 88 89
NC MEMORIAL HOSP.
CHAPEL HILL 27599 919 966-5131
SUNY-SYRACUSE

PATEL, DIPA HARISH S
136 BEECHWOOD DR. 92 00
CARRBORO 27510 919 942-0899
U OF NC

POLLARD, RICHARD J. S
41 GOOSENECK RD. 91 87
CHAPEL HILL 27514 919 942-9470
U OF NC

RENDT, KAREN ELIZABETH OSSESIA R
139 MALLARD COURT 85 89 91
CHAPEL HILL 27514 919 684-2949
U OF PENN

RILEY, KATHLEEN ANN R
113 SNOWCREST TRAIL 90 00 90
DURHAM 27707 919 684-8111
ALBANY MED COLL

ROSSITCH, EUGENE, JR. R
3608 COURTLAND DR. 85 87 82
DURHAM 27707 617 623-2063
DUKE

ROZAS, LYNDA L. S
164 SUMMERWALK CIR. 92 88
CHAPEL HILL 27514
U OF NC

SCHUST, RENEE THERESE R
625 WINDSONG LN. 89 89 89
DURHAM 27713 919 966-4131
U OF WISCONSIN

SHIH, DEBORAH P. S
2613 CAMELLIA DR. 91 87
DURHAM 27705 919 383-2016
DUKE

SIDHU-MALIK, NAUJEET KAUR R
3611 UNIVERSITY DR., APT. 21R 86 88 90
DURHAM 27707 919 684-2291
DUKE

SIMNAD, VIRGINIA I. S
106-B WEATHERSTONE DR. 93 90
CHAPEL HILL 27514 919 968-4109
U OF NC

SMITH, ELLISON L. S
502-B COOLIDGE ST. 93 89
CHAPEL HILL 27516 919 942-2335
U OF NC

SMITH, ELTON TRAVIS, JR. S
601 JONES FERRY RD., APT. B-9 91 89
CARRBORO 27510 919 968-3554
U OF NC

SMITH, SCOTT VICTOR S
4639 HOPE VALLEY RD. APT. J 92 86
DURHAM 27707
U OF NC

SOTO, PABLO F. S
15 DURBIN PL. 91 86
DURHAM 27705 919 383-4367
DUKE

SOUZA, JOSEPH JOHN R
1250-M3 EPHESUS CHURCH RD. 90 00 90
CHAPEL HILL 27514
M C OF WISCONSIN

SREBRO, SHARON HANDY S
5511 FRENCHMEN'S CREEK DR. 94-9
DURHAM 27713 919 544-598
DUKE

ST. CLARIE, KAREN SUE AC
BOX 3500, DUMC 82 87 86
DURHAM 27710 919 684-3006
U OF TEXAS

SUES, ANJALI MITTRA S
5209 SMALLWOOD CT. 92 89
RALEIGH 27613 919 846-0949
U OF NC

SUMMERS, CHRISTOPHER JAFFA S
1119 HILLCREST DR. 93 90
CHAPEL HILL 27514 919 932-3374
U OF NC

THEL, MARK CHARLES R
910 CONSTITUTION DR. APT. 906 86 00 89
DURHAM 27705 919 684-8111
GEORGETOWN U

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

OPE, WHITNEY DAVISON R
1500 DUKE UNIVERSITY RD. #M3B 88 89 90
DURHAM 27701 919 684-2291
DUKE

RAN, VAN PIERRE R
17 BALMORAY COURT, APT. 21 87 00 90
DURHAM 27707 919 684-8111

RANT, CHARLES AMON, JR. R
128 SHADY SPRING PL. 89 89 85
DURHAM 27705 919 489-0175
EAST CAROLINA U

RIPLETT, PATRICIA FOWLER S
6 ICON CT. 91 88
DURHAM 27703 919 596-8207
U OF NC

NDESSER, KARL PETER R
1808 STREBOR ST. 89 00 89
DURHAM 27705 919 684-8111
U TX-SAN ANTONIO

PCHURCH, GILBERT R., JR. S
103 GOLDSTON DR. 91 88
CARRBORO 27510 919 942-8105
U OF NC

'ANDERSTEENHOVEN, JACOB JAN R
4412 SUNNY CT. 87-91
DURHAM 27705 919 684-3300
MED. U OF SC

'OGLER, ROBERT C. S
119-C STINSON ST. 91 88
CHAPEL HILL 27516 919 933-7867
U OF NC

VALLACH, ANDREW B. S
101-A MISTYWOODS CIR. 91 88
CHAPEL HILL 27514 919 968-9401
U OF NC

VANG, LISA L. S
20F UNIVERSITY LAKE APTS. 92 88
CARRBORO 27510 919 933-6341
U OF NC

VEAVER, DAVID ELLIS R
105 MALLARD CT. 84 88 89
CHAPEL HILL 27514 919 966-5201
U TX-SOU.WESTERN

VOODARD, PAMELA K. R
324 NORTHAMPTON PLAZA 90 00 86
CHAPEL HILL 27514 919 966-4131
DUKE

VRIGHT, TONY MARRONE S
B-3 THE VILLAGES 92 89
SMITH LEVEL RD.
CARRBORO 27510 919 967-7963
U OF NC

'EN, STEPHANIE P. S
BOX 2875, DUMC 92 88
DURHAM 27710 919 684-6124
DUKE

'ARZAR, DAVID PAUL S
S-4 THE VILLAGES APTS. 93 89
CARRBORO 27510 919 942-0294
U OF NC

)OLESCENT MEDICINE

;COTT, LINCOLN BAIN ADL AC
UNC STUDENT HEALTH SERVICE 58 61 72
CHAPEL HILL 27599
U OF PENN

'OUNG, W. P. WILTSEE ADL /PD AC
STUDENT HEALTH SERVICE,CB 747058 58 81
CB 7472
CHAPEL HILL 27599 919 966-6570
MED COLL OF VA

.LERGY & IMMUNOLOGY

'EARL, ELLIOTT RICHARD AI /PD AC
708 GREENWOOD RD. 70 70 90
CHAPEL HILL 27514 919 490-8745
U OF IOWA

NESTHESIOLOGY

BECHTOLDT, ALBERT ARTHUR, JR. AN AC
UNC, DEPT. OF ANES. 61 61 69
CHAPEL HILL 27599 919 966-5136
YALE

BLOCH, EDMOND CECIL AN /PD AC
BOX 3094, DUMC 46 47 80
DURHAM 27710 919 681-5737
U OF CAPE TOWN

BUCKWALTER, JOHN D. AN AC
RT. #7, BOX 60 82 85 87
DURHAM 27707 919 470-4000
U OF NC

CAMPORESI, ENRICO MARIO AN AC
750 E. ADAMS ST. 70 71 81
DEPT. OF ANES.
SYRACUSE, NY 13270 919 681-3167
U OF DI MILANO

CARPENTER, FREDERICK J., JR. AN AC
BOX 15609 82 85 89
DURHAM 27704 919 470-6186
U OF WISCONSIN

FORTNEY, JENNIFER TAYLOR AN AC
BOX 3094, DUMC 78 79 84
DURHAM 27710 919 684-2945
U OF MARYLAND

FOX, ELISABETH JUNE AN AC
BOX 3083, DUMC 55 67 78
DURHAM 27710 919 681-3560
U OF LONDON

FREIBERGER, JOHN JACOB AN /CC AC
830 KENMORE RD. 79 79 89
CHAPEL HILL 27514 919 470-4000
U TX-SOU.WESTERN

GLASS, PETER STANLEY A. AN AC
BOX 3094, DUMC 76 77 86
DURHAM 27710 919 684-5045
U-WITWATERSRAND

GOLDBERG, JOEL STEVEN AN AC
RT. #1, BOX 2602 77 78 83
HILLSBOROUGH 27278 919 286-6938
DUKE

HARMEL, MEREL HILBER AN L/RT
BOX 3094, DUMC 43 43 71
DURHAM 27710 919 684-2945
JOHNS HOPKINS

HODGINS, LEWIS ROGER AN C
33 LANSGATE COURT 85 86 86
DURHAM 27713 919 544-2781
DOWNSTATE ME CTR

HOGGE, LEWIS HERBERT, JR. AN R
910 CONSTITUTION DR. #909 86 89 90
DURHAM 27705 919 681-2498
EASTERN VA

JARRELL, JOHN ARTHUR, JR. AN RT
2924 BUCKINGHAM RD. 49 50 73
DURHAM 27707 919 684-2368
JOHNS HOPKINS

KARIS, JOANNES HUBERTUS AN AC
BOX 3094, DUMC 52 56 60
DURHAM 27710 919 681-6944
U OF UTRECHT

KILEFF, MOYRA ELEANOR AN AC
403 CLAYTON ROAD 73 74 83
CHAPEL HILL 27514 919 470-4000
HUGGINS MED SCH

LESLIE, JOHN BRUCE AN AC
BOX 3094, DUMC 76 78 86
DURHAM 27710 919 681-5991
DUKE

MANN, ELIZABETH SPRAGUE AN C
UNC, DEPT. OF ANES., CB 7010 69 73 90
223 BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-5136
CORNELL U

MARGOLIS, JUDITH OLSHANSKY AN C
1805 PATHWAY DR. 84 85 90
CARRBORO 27510 919 966-5131
U OF COLORADO

MEYER, ANDREW FREDERIC AN AC
BOX 3083, DUKE MED. CENTER 69 70 83
DURHAM 27710 919 681-6526
DOWNSTATE ME CTR

MOON, RICHARD E. AN /PUD AC
BOX 3094, DUMC 73 74 88
DURHAM 27710 919 681-5805
MCGILL U

MURRAY, WILLIAM JAMES AN /PA AC
BOX 3094, DUMC 62 62 64
DURHAM 27710 919 684-2569
U OF NC

REDDY, PARVATA CHINNA P. AN AC
PO BOX 15609 61 63 85
DURHAM CO. GEN. HOSPITAL
DURHAM 27704 919 471-3411
KURNOOL MED COLL

REDICK, LLOYD FRANKLIN AN AC
BOX 3094, DUMC 58 58 74
DURHAM 27710 919 681-3345
OHIO STATE U

REVES, JOS. GERALD AN AC
BOX 3094, DUMC 69 69 87
DURHAM 27710 919 681-6646
MED U OF SC

SCHWINN, DEBRA ANNE AN AC
BOX 3094, DUMC 83 84 86
DURHAM 27710 919 681-4774
STANFORD U

SCOTT-HARRIS, DIANNE L. AN AC
BOX 3094, DUMC 78 80 83
DURHAM 27710 919 684-3239
U OF NC

SIBERT, KAREN SULLIVAN AN AC
GUILFORD ANESTHESIA 82 85 89
PO BOX 9283
GREENSBORO 27408 919 691-6549
BAYLOR

SPRAGUE, DAVID HUGH AN AC
UNC-DEPT. OF ANES. 69 70 85
CHAPEL HILL 27599 919 966-3371
ALBANY MED COLL

STANKUS, PAUL VICTOR AN AC
7 LITCHFORD ROAD 76 76 81
CHAPEL HILL 27514 919 967-5295
U OF NC

SUGIOKA, KENNETH AN L/RT
319 BAYBERRY DR. 49 54 55
CHAPEL HILL 27514 919 933-0487
WASHINGTON U

THOMAS, CATHY WALL AN C
PO BOX 15609 84 85 90
DURHAM 27704 919 470-6186
U OF NC

VARTANIAN, VARTAN AN RT
23 CLOVER PL. 61 66 77
DURHAM 27705 919 684-6841
DUKE

VAUGHAN, ROBERT WILLIAM AN AC
101 BARNHILL PLACE 66 66 84
CHAPEL HILL 27514 919 966-5136
U TX-SOU.WESTERN

WATKINS, WALTER DAVID AN /PA AC
BOX 3094, DUMC 75 78 84
DURHAM 27710 919 681-2498
U OF COLORADO

WEITZNER, STANLEY WALLACE AN AC
104 HAMPSHIRE PL. 53 54 78
CHAPEL HILL 27516 919 684-2425
NEW YORK U

CARDIOVASCULAR DISEASES

BUCHANAN, ROBERT A., JR. CD /IM AC
2609 N. DUKE ST., STE 403 69 69 74
DURHAM 27704 919 471-8441
BOWMAN GRAY

CASCIO, WAYNE E. CD /IM AC
CB 7075, BURNETT-WOMACK BLDG. 80 82 88
CHAPEL HILL 27599
U OF MARYLAND

DEHMER, GREGORY J. CD /IM AC
UNC HOSP. CARDIAC CATH LAB 75 75 89
101 MANNING DR.
CHAPEL HILL 27599 919 966-5141
U OF WISCONSIN

DICK, ANDREW EDWARD CD AC
134 MALLARD COURT 82 84 89
CHAPEL HILL 27514 919 942-8741
MEHARRY MED COLL

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

FLOYD, WALTER LAWRENCE CD /IM AC
54 56 59
BOX 2997, DUMC
DURHAM 27710 919 684-2845
JOHNS HOPKINS

GRIGGS, THOMAS RUSSELL CD /IM AC
69 69 77
UNC SCHOOL OF MED. CB 7075
DEPT. OF MED. & PATHOLOGY
CHAPEL HILL 27599 919 966-5207
U OF NC

HENKE, ELIZABETH CD AC
74 75 90
CENTRAL MEDICAL PK, BLDG 700
DURHAM 27704 919 471-0509
UNIV OF WALES

HIGGINBOTHAM, MICHAEL BARRIE CD AC
73 73 90
BOX 31219, DUMC
DURHAM 27710 919 681-2919
U OF MELBOURNE

MCALLISTER, RUSSELL G.,JR. CD /PA AC
67 68 86
3712 DOVER RD.
DURHAM 27707 919 361-2286
MED COLL OF VA

MILLER, DAVID EDMOND CD /IM AC
56 56 64
CENTRAL MEDICAL PARK
2609 N. DUKE ST., STE. 403
DURHAM 27704 919 471-8441
DUKE

MORRIS, JAMES JOSEPH, JR. CD /IM AC
59 66 86
BOX 2993, DUMC
DURHAM 27710 919 684-4329
DOWNSTATE ME CTR

ORGAIN, EDWARD STEWART CD /IM L/RT
30 30 36
3321 DEVON ROAD
DURHAM 27707 919 489-2111
U OF VIRGINIA

PHILLIPS, HARRY RISSLER, III CD /IM AC
75 78 72
BOX 3126, DUMC
DURHAM 27710 919 681-5816
DUKE

WALSTON, ABE, II CD /IM AC
63 63 76
PO BOX 16999
4205 BEN FRANKLIN BLVD.
DURHAM 27704 919 682-5561
DUKE

WHALEN, ROBERT EMMET CD /IM AC
56 59 68
DUKE UNIV. MED. CTR.
DURHAM 27710 919 684-6315
CORNELL U

WOODS, JAMES WATSON, JR. CD /IM L/RT
43 48 48
1920 DAIRYLAND RD.
CHAPEL HILL 27516 919 942-4624
VANDERBILT U

YOUNG, DANIEL TEST CD /IM AC
50 50 57
UNC,338 CLINICAL SCI. 229-H
CHAPEL HILL 27599 919 966-4602
HARVARD

CARDIOVASCULAR SURGERY

LOWE, JAMES EDWARD CDS /TS AC
73 74 84
BOX 3954, DUMC
DURHAM 27710 919 684-3235
U OF CALIF-LA

MARSICANO, THOMAS H. CDS /VS C
73 73 86
4125 BEN FRANKLIN BLVD.STE.100
DURHAM 27704 919 471-9332
OHIO STATE U

OLDHAM, H. NEWLAND, JR. CDS /GS AC
61 61 72
DUKE UNIV. MED. CTR.
DURHAM 27710 919 684-3243
BAYLOR

SMITH, PETER KENT CDS AC
77 83 88
BOX 3442, DUMC
DURHAM 27710 919 684-2890
DUKE

UNGERLEIDER, ROSS MICHAEL CDS /PDS C
77 80 90
BOX 3178, DUMC
DURHAM 27710 919 681-2343
RUSH MED COLL

WEAVER, JAMES PHILLIP CDS AC
69 71 84
PO BOX 15249
3901 ROXBORO RD.
DURHAM 27704 919 479-4100
U OF PENN

WILCOX, BENSON REID CDS /TS AC
57 57 65
UNC, CB 7065
BURNETT-WOMACK #108
CHAPEL HILL 27599 919 966-3381
U OF NC

WOLFE, WALTER GEORGE CDS /TS AC
63 63 72
BOX 3507, DUMC
DURHAM 27710 919 684-4117
TEMPLE U

CHILD NEUROLOGY

GREENWOOD, ROBERT SAMUEL CHN /PD AC
68 68 79
UNC, 751 CLINICAL SCI. 229-H
CHAPEL HILL 27599 919 966-2528
U OF TEXAS

TENNISON, MICHAEL BYRON CHN /PD AC
75 79 81
UNC SCHOOL OF MEDICINE
751 BURNETT-WOMACK BLDG. 229-H
CHAPEL HILL 27599 919 966-2528
HARVARD

CHILD PSYCHIATRY

AMAYA, MARCELINO CHP /P AC
54 65 66
2928 FRIENDSHIP ROAD
DURHAM 27705 919 575-7621
NAT U OF MEXICO

BARNHILL, LARRY JARRETT,JR. CHP /P AC
75 75 80
120 BONAPARTE DR.
HILLSBOROUGH 27278 919 966-4136
BOWMAN GRAY

BOSWELL, JOHN IVERSON, JR. CHP /P AC
57 58 64
UNC, DEPT. OF PSYCHIATRY
WING C, RM. 237, CB #7160
CHAPEL HILL 27599 919 966-3379
U OF VIRGINIA

BRANTLEY, INGRID JEAN CHP /P AC
74 80 80
3510 UNIVERSITY DRIVE
DURHAM 27707 919 489-1884
DUKE

JONES, JAMES DAVID CHP /PD AC
54 55 63
BOX 3115, DUMC
DURHAM 27710 919 684-2372
DUKE

RAFT, ELIZABETH VANCE CHP /P AC
60 60 71
33 KIMBERLY DRIVE
DURHAM 27707 919 489-7011
U OF NC

STEVENSON, KARL CHP /P AC
66 66 73
2609 N. DUKE ST., STE. 103
DURHAM 27704 919 220-5426
BOWMAN GRAY

CLINICAL PATHOLOGY

MCLENDON, WILLIAM WOODARD CLP /PTH AC
56 56 63
N. C. MEMORIAL HOSPITAL
DEPT. OF HOSPITAL LABORATORIES
CHAPEL HILL 27514 919 966-2317
U OF NC

DERMATOLOGY

BURTON, CLAUDE SHREVE,III D /IM AC
79 81 84
BOX 3511, DUMC
DURHAM 27710 919 684-5037
DUKE

CALLAWAY, JASPER LAMAR D L/RT
32 32 37
26 STONERIDGE CIR.
DURHAM 27705 919 684-3432
DUKE

CARR, JOHN FERGUSON, II D AC
68 68 76
1200 BROAD ST.
DURHAM 27705 919 286-7903
U OF TENNESSEE

CLARK, ROBERT EARL D C
85 87 89
BOX 3915, DUMC
DURHAM 27710 919 684-6805
U TX-SOU.WESTERN

CRANE, GEORGE WILLIAM, JR. D L
46 49 49
1200 BROAD STREET
DURHAM 27705 919 286-7903
NORTHWESTERN U

ELAM, MOSES D. D AC
78 80 91
3150 DURALEIGH RD.
RALEIGH 27615 919 881-5408
MED SCH-UMDNJ

GAMMON, WALTER RAY D AC
71 71 86
404 WHITEHEAD CIRCLE
CHAPEL HILL 27514 919 966-3322
U OF NC

GILGOR, ROBERT SAMUEL D AC
62 62 69
891 WILLOW DRIVE
CHAPEL HILL 27514 919 942-3106
U OF PENN

LEVY, STANLEY BENJAMIN D AC
71 72 81
891 WILLOW DRIVE
CHAPEL HILL 27514 919 942-3106
GEORGETOWN U

MAURO, PATRICIA MARCHASE D AC
77 78 84
2609 N. DUKE ST. STE. 505
DURHAM 27704 919 477-2121
CORNELL U

MURRAY, JOHN CARROLL D AC
77 82 83
BOX 2907, DUMC
DURHAM 27710 919 684-2393
DUKE

OLSEN, ELISE ARLINE D /IM AC
78 78 79
BOX 3294, DUMC
DURHAM 27710 919 684-6844
BAYLOR

ROBBINS, JACK GUYES D AC
48 49 54
823 BROAD STREET
DURHAM 27705 919 286-4195
DUKE

TOMSICK, ROBERT S. D AC
76 77 85
UNC, DEPT. OF DERMATOLOGY
CHAPEL HILL 27599 919 966-4506
U OF NC

WEINRICH, A. ELISE D AC
78 78 83
2609 N. DUKE ST. STE. 505
DURHAM 27704 919 477-2121
MED U OF SC

WHEELER, CLAYTON EUGENE, JR. D /IM L
41 62 62
NCMH, DEPT. OF DERMATOLOGY
CHAPEL HILL 27599 919 966-4507
U OF WISCONSIN

DIAGNOSTIC RADIOLOGY

BAKER, MARK EARLY DR AC
78 79 83
DUMC, BOX 3808
DURHAM 27710 919 681-2711
LOYOLA U

BREAM, CHARLES ANTHONY DR L
40 40 52
N. C. MEMORIAL HOSPITAL
CHAPEL HILL 27599 919 966-1461
TEMPLE U

CLARK, RICHARD LEE DR AC
66 66 74
901 PHILS CREEK RD.
CHAPEL HILL 27516 919 966-4400
JOHNS HOPKINS

CRANE, LARRY MARTIN DR AC
68 68 74
3905 DARBY RD.
DURHAM 27707 919 470-5289
BAYLOR

HATTEN, H. PAUL, JR. DR AC
73 73 79
DUMC, BOX 3808
DURHAM 27710
WEST VA U

HERTZBERG, BARBARA S. DR AC
80 83 88
BOX 3808, DUMC
DURHAM 27710 919 684-2711
DUKE

HIDALGO, HECTOR JESUS DR AC
76 77 85
2609 N. DUKE ST.
DURHAM 27704 919 471-8411
GEO WASHINGTON U

HORVATH, LAURA JEAN DR AC
81 86 87
2609 N. DUKE ST.
DURHAM RADIOLOGY ASSOC.
DURHAM 27704 919 471-8411
TEMPLE U

32. DURHAM-ORANGE COMPONENT SOCIETY

OHNSON, KEVIN M. DR AC
2609 N. DUKE ST. 81 81 88
DURHAM RADIOLOGY ASSOCIATES
DURHAM 27704 919 471-8411
TEMPLE U

OON, CRAWFORD BRYAN DR AC
2609 N. DUKE ST. 70 70 77
DURHAM 27704 919 471-8411
U OF NC

EDER, RICHARD ADAM DR AC
6 STRIDING RIDGE CT. 84 84 88
DURHAM 27713 919 681-2711
BOSTON U

AURO, MATTHEW ANTHONY DR AC
101 CATAWBA COURT 77 78 83
CHAPEL HILL 27514 919 966-1461
CORNELL U

CADAMS, HOLMAN PAGE DR R
10321 CRESTMOOR DR. 86 00 84
SILVER SPRING, MD 20901 301 681-8511
DUKE

CCARTNEY, WILLIAM HUGH DR /NM AC
NCMH, DEPT. OF RADIOLOGY 69 70 81
CHAPEL HILL 27599 919 966-4384
NORTHWESTERN U

CCRORY, MICHAEL ELLIOTT DR AC
2609 N. DUKE ST. STE. 303 73 74 79
DURHAM 27704 919 471-8411
TUFTS U

CLELLAND, ROBERT DR AC
UNC DEPT. OF RADIOLOGY 48 48 74
CHAPEL HILL 27599 919 966-3084
U OF CINCINNATI

LDER, ROBERT ALAN DR AC
3104 DEVON RD. 68 68 77
DURHAM 27707 919 383-6984
DUKE

ICE, REED PORTER DR AC
DUKE HOSPITAL 55 61 61
DURHAM 27710 919 684-2711
INDIANA U

ALLEE, D. SKIP DR R
7070 CLAUGHTON ISLAND DR.#161685 86 87
MIAMI, FL 33131 305 530-1973
MISSOURI U-KC

PRITZER, CHARLES EDWARD DR AC
BOX 3808, DUMC 81 85 90
DURHAM 27710 919 660-2711
U OF PITTSBURGH

ANDEMARK, ROBERT M. DR /EM AC
BOX 3808, DUMC 81 82 87
DEPT. OF RADIOLOGY
DURHAM 27710 919 681-2711
SUNY-SYRACUSE

VEBB, MICHAEL STEPHEN, JR. DR R
2109 SPRUNT AVE. 89 90 85
DURHAM 27705 919 286-5959
DUKE

WHALEY, ROBERT ALLAN DR /N AC
748 SHADYLAWN ROAD 58 66 80
CHAPEL HILL 27514 919 966-4397
M C OF WISCONSIN

MERGENCY MEDICINE

GARRISON, HERBERT G., III EM R
UNC CB #7105, OLD CLINIC BLDG. 86 86 88
CHAPEL HILL 27599 919 758-6245
U OF NC

GOLDMAN, JAMES OSWALD, JR. EM /ADM AC
PO BOX 1799 77 78 75
WAKE FOREST 27588 919 556-5665
U OF NC

HANSEN, ALFRED ROY EM /FP AC
522 DOGWOOD DR. 77 77 82
CHAPEL HILL 27516 919 966-5643
U OF IOWA

MCLEAR, RONALD KENT EM AC
3200 CROASDAILE DR. STE. 201 75 77 82
DURHAM 27705 919 383-0709
OHIO STATE U

SILBERMAN, HAROLD REITER EM /IM AC
NPC 3-96. FI,V 56 57 64
DURHAM 27710 919 684-5537
WASHINGTON U

TRUED, SALLY J. EM AC
NC MEMORIAL HOSP STE. 1015 75 76 88
CHAPEL HILL 27599 919 966-5933
GEO WASHINGTON U

WHITAKER, GARY RANDALL EM AC
2828 CROASDAILE 68 72 89
DURHAM 27705 919 383-0355
TULANE U

ENDOCRINOLOGY

DUNN, FREDRICK LAURENCE END /DIA AC
BOX 3939, DUMC 74 75 89
DURHAM 27710 919 684-3319
U OF ILLINOIS

EARP, HENRY SHELTON, III END /IM AC
UNC, DEPT. OF MEDICINE 70 71 79
CHAPEL HILL 27599 919 966-3338
U OF NC

GRAY, TIMOTHY KENNEY END /IM AC
UNC, DEPT. OF MEDICINE 65 65 71
CB 7170, MACNIDER BLDG.
CHAPEL HILL 27599 919 966-3336
U OF MARYLAND

GWYNNE, JOHN THOMAS END AC
234 HUNTINGTON DRIVE 70 72 81
CHAPEL HILL 27514 919 966-3338
DUKE

MCPHERSON, HARRY THURMAN END /IM AC
DUKE UNIV. MED. CTR. 48 53 55
DURHAM 27710 919 684-2186
DUKE

ONTJES, DAVID AINSWORTH END /IM AC
UNC SCHOOL OF MEDICINE 64 64 70
CHAPEL HILL 27599 919 966-3336
HARVARD

FORENSIC PATHOLOGY

BUTTS, JOHN DAVIS, JR. FOP AC
OFF.OF CHIEF MEDICAL EXAMINER 72 73 79
CHAPEL HILL 27599 919 966-2253
DUKE

FAMILY PRACTICE

BARCO, DANIEL H. FP AC
2020 W. MAIN ST. 72 74 88
DURHAM 27705 919 286-3885
DUKE

BILLICA, WILLIAM HARRY FP C
BOX 2914, DUMC,ERWIN SQUARE 85 87 84
DEPT. OF COMM. AND FAMILY MED.
DURHAM 27710 919 548-9618
U OF NC

BIRMINGHAM, LORRAINE FAITH FP AC
10817 TRAPPERS CREEK DR. 81 84 86
RALEIGH 27614 919 870-7633
DUKE

BRADLEY, DON WAYNE FP AC
PO BOX 30004 76 80 90
BLUE CROSS/BLUE SHIELD OF NC
DURHAM 27702 919 490-4003
MED COLL OF VA

BROWN, SUSAN EVANS FP AC
5501 FORTUNE'S RIDGE, STE. A 76 77 86
DURHAM 27713 919 493-8877
GEORGETOWN U

CORNWELL, SARAH BYRD FP AC
3116 N. DUKE ST. 85 85 84
DURHAM 27704 919 493-8651
DUKE

DEANGELIS, WASHINGTON J. FP /DIA AC
1001 S. HAMILTON ROAD 59 59 71
CHAPEL HILL 27514 919 968-4551
U OF URUGUAY

DYKES, JAMES RUSSELL FP AC
114 SWIFT AVE. 80 81 84
DURHAM 27705 919 286-7755
DUKE

FOOTE, MARGARET J.G. FP /GP AC
2473 FOXWOOD DR. 76 78 88
CHAPEL HILL 27514 919 933-9932
U OF W ONTARIO

FURMAN, JEFFREY WILLIAM FP /HYP AC
120 CONNER DR., STE. 200 78 80 85
CHAPEL HILL 27514 919 967-8291
U OF CINCINNATI

GUITERAS, GEORGE PATRICK FP AC
120 CONNER DR., STE. 200 69 69 75
CHAPEL HILL 27514 919 967-8291
U OF NC

HUNTLEY, ROBERT ROSS FP AS
PO BOX 190 51 51 53
CHAPEL HILL 27514 919 942-7210
BOWMAN GRAY

JONES, J. KEMPTON FP AC
1001 S. HAMILTON ROAD 46 50 50
CHAPEL HILL 27514 919 968-4551
DUKE

JOYNER, WILLIAM STAFFORD FP L/RT
401 WHITEHEAD CIR. 52 52 54
CHAPEL HILL 27514 919 968-4551
HARVARD

LAMBERTSEN, CHRISTIAN J., JR. FP /OM AC
PO BOX 12833 76 77 88
RESEARCH TRIANGEL PK 27709 919 549-9321
U OF PENN

MCBRIDE, ALLEN JOSEPH FP /ADM AC
BLUE CROSS/BLUE SHIELD OF NC 78 79 83
PO BOX 2291
DURHAM 27702 919 490-2585
MED COLL OF VA

MCGRATH, JAMES STUART FP C
3116 N. DUKE ST. 80 80 84
DURHAM 27704 919 479-6200
TULANE U

MURPHY, ROBERT JENNINGS, JR. FP /PD L
1016 ORANGE HIGH SCHOOL RD. 40 40 42
HILLSBOROUGH 27278 919 732-9314
VANDERBILT U

MURRAY, JANE H. FP AC
5501 FORTUNE'S RIDGE DR. 84 85 87
DURHAM 27713 919 471-2571
U OF NC

NEWTON, SANDRA JO FP C
5009 BOULDER RUN RD. 84 84 90
HILLSBOROUGH 27278 919 479-6300
WAYNE STATE U

NORTON DEBORAH RUTH FP AC
PO BOX 4 84 86 89
PROSPECT HILL COMM HEALTH CTR.
PROSPECT HILL 27314 919 562-3311
U OF ILLINOIS

PARKERSON, GEORGE ROBERT, JR. FP AC
BOX 2914, DUMC 53 55 75
DURHAM 27710 919 286-9896
DUKE

PRENTICE, ROBERT DEREK FP AC
3116 N. DUKE ST. 70 70 85
DURHAM 27704 919 479-6300
U OF EDINBURGH

REEB, KENNETH GEORGE FP AC
UNC, FAMILY MED. CB 7595 63 63 89
CHAPEL HILL 27599 919 966-3711
U OF WISCONSIN

SHACKELFORD, JOSEPH ROY, III FP RT
NCMH MANNING DR. 59 59 85
DEPT. OF FAMILY PRACTICE
CHAPEL HILL 27599 919 968-9574
VANDERBILT U

SMITH, DAVID ALDEN FP AC
6350 QUADRANGLE DR. 82 84 85
CHAPEL HILL 27514 919 967-4202
U OF CALIFORNIA

SOTOLONGO, CARLOS A. FP AC
5501 FORTUNE RIDGE DR., STE. A 81 83 87
DURHAM 27713 919 544-3737
AUTONOMA UNIV

VUKOSON, MATTHEW BRUCE FP AC
UNC, STUDENT HEALTH SERVICE 77 78 81
CHAPEL HILL 27599 919 966-2281
WEST VA U

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

WARBURTON, SAMUEL WOODWARD,JR. FP C
2220 W. MAIN ST. 69 70 81
DURHAM 27705 919 286-3885
U OF PENN

FACIAL PLASTIC SURGERY, OTO

ADAMS, B. JEANNE S. FPS /HNS AC
1110 W. MAIN STREET 76 77 80
DURHAM 27701 919 682-9341
DUKE

ANGELILLO, JOHN CHARLES FPS AC
DUKE MEDICAL CENTER 70 70 76
DIV. OF PLASTIC SURGERY
DURHAM 27710 919 684-2943
DUKE

GASTROENTEROLOGY

ALVA, JUAN GE /IM AC
609 VICKERS AVENUE 60 77 81
DURHAM 27701 919 688-4748
ST LOUIS U

BOZYMSKI, EUGENE MICHAEL GE /IM AC
UNC,DEPT. MED., CB #7080 60 60 69
324 BURNETT-WOMACK BLDG
CHAPEL HILL 27599 919 966-2511
M C OF WISCONSIN

DROSSMAN, DOUGLAS ARNOLD GE /PYM AC
UNC, 324 CLINICAL SCIENCE BLDG 70 71 79
CHAPEL HILL 27599 919 966-2511
ALBERT EINSTEIN

LESESNE, HENRY ROBY GE /IM AC
N. C. MEMORIAL HOSPITAL 67 67 74
CHAPEL HILL 27599 919 966-2511
VANDERBILT U

LEVINSON, SIDNEY ENGEL GE /IM AC
891 W. WILLOW DRIVE 74 75 81
CHAPEL HILL 27514 919 942-5123
CORNELL U

MCLEOD, MICHAEL EUGENE GE /IM AC
BOX 3073, DUMC 60 60 69
DURHAM 27710 919 684-4046
DUKE

ORLANDO, ROY CHARLES GE /IM AC
326 CLINICAL SCI.BLDG.CB 7080 68 68 77
UNC DEPT. OF MEDICINE
CHAPEL HILL 27599 919 966-2511
GEORGETOWN U

POWELL, DON WATSON GE /IM AC
UNC, DEPT. OF MED. 63 63 71
CB 7005, 3029 OLD CLINIC BLDG.
CHAPEL HILL 27599 919 966-4064
U OF ALABAMA

SAHBA, MEHRDAD MAJDZADEH GE /IM AC
PO BOX 16999 57 57 72
4205 BEN FRANKLIN BLVD.
DURHAM 27704 919 682-5561
U OF ISFAHAN

SANDLER, ROBERT SAMUEL GE AC
UNC, CB #7080 75 76 83
423 BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-2511
YALE

SARTOR, R. BALFOUR GE /IM AC
UNC CB 7080 74 74 89
BURNETT-WOMACK BLDG
CHAPEL HILL 27599 919 966-2511
BAYLOR

SESSIONS, JOHN TURNER, JR. GE /IM AC
UNC, 324 CLINICAL SCI. 229-H 45 45 52
CHAPEL HILL 27599 919 966-2511
EMORY U

SINGLETARY, WILLIAM VANCE, JR. GE AC
PO BOX 16999 75 78 80
4205 BEN FRANKLIN BLVD.
DURHAM 27704 919 682-5561
DUKE

GERIATRICS

WILLIAMS, MARK E. GER /IM AC
UNC, 141 MACNIDER BLDG. 76 76 88
CB 7550
CHAPEL HILL 27599 919 966-5945
U OF NC

GENERAL PRACTICE

JONES, THOMAS THWEATT GP L/RT
608 W. MARKHAM AVE. 32 34 35
DURHAM 27701 919 489-2115
JOHNS HOPKINS

MACFARLAND, JOSEPH ALFRED GP AC
UNC STUDENT HEALTH SERVICE 67 68 72
CAMPUS BOX 7470
CHAPEL HILL 27599 919 966-2281
COLUMBIA U

RODWELL, ELEANOR GP L/RT
1118 HILLANDALE ROAD 42 42 44
DURHAM 27705 919 286-1119
TEMPLE U

GENERAL PREVENTIVE MEDICINE

FLEMING, WILLIAM LEROY GPM /IM L/RT
UNC, DEPT. OF FAMILY MED. 32 32 40
CHAPEL HILL 27599 919 966-5744
VANDERBILT U

JOSEPH, MICHAEL C. GPM /PD AC
5716 GENESSEE DR. 76 77 86
DURHAM 27712 919 471-3278
U OF CALIFORNIA

MAYER, EUGENE STEPHEN GPM AC
UNC, CB 7165, WING C, BOX 3 64 64 73
CHAPEL HILL 27599 919 966-2461
COLUMBIA U

NUGENT, RICHARD RECHER GPM /OBG AC
DIV.OF MATERNAL/CHILD HEALTH 66 67 80
PO BOX 27687
RALEIGH 27611 919 733-7791
U OF PENN

WESTLAND, MARGARET M. H. GPM AC
GLAXO, INC 69 70 90
FIVE MOORE DR.
RESEARCH TRIANGLE PK 27709 919 990-5057
U OF KENTUCKY

GENERAL SURGERY

AKWARI, ONYEKWERE E. GS AC
BOX 3076, DUMC 70 73 87
DURHAM 27710 919 684-5509
U OF SOU CALIF

ANLYAN, WILLIAM GEORGE GS AC
2200 W. MAIN ST., STE. 1066 49 51 56
DURHAM 27705 919 684-3438
YALE

ANSTADT, MARK PETER GS R
803 LEON ST. 86 88 89
DURHAM 27704 919 684-6012
WRIGHT STATE U

BAKER, CHRISTOPHER CAMERON GS /CC AC
UNC, CB 7210 74 75 90
215 BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-4389
HARVARD

BOLLINGER, RALPH RANDAL GS /IG AC
BOX 2910, DUKE HOSPITAL 70 70 80
DURHAM 27710 919 684-5209
TULANE U

BURHANS, ROLLIN SCOFIELD, JR. GS AC
PO BOX 15249 63 63 71
3901 ROXBORO RD.
DURHAM 27704 919 479-4100
U OF LOUISVILLE

BURNHAM, STEVEN JAMES GS AC
UNC, DEPT. OF VS 72 72 79
229-H CLINICAL SCIENCE BLDG.
CHAPEL HILL 27599 919 966-3391
VANDERBILT U

BURNS, WALTER WOODROW, JR. GS AC
PO BOX 15249 69 72 76
3901 ROXBORO RD.
DURHAM 27704 919 967-8258
U OF NC

CHEEK, JOHN MERRITT, JR. GS L/RT
1414 KENT STREET 45 45 52
DURHAM 27707 919 489-1241
BOWMAN GRAY

CROOM, ROBERT DEVANE, III GS AC
UNC SCHOOL OF MEDICINE 64 64 74
DEPT. OF SURGERY, CB 7210
CHAPEL HILL 27599 919 966-4416
U OF NC

DANIEL, JOHN THOMAS, JR. GS AC
415 DUNSTAN STREET 64 64 72
DURHAM 27707 919 682-7378
HOWARD U

DAVIS, JAMES EVANS GS /TS L
2609 N. DUKE ST., STE. 402 43 43 51
DURHAM 27704 919 471-8439
U OF PENN

GRANT, JOHN PALMER GS /NTR AC
BOX 3105, DUMC 69 78 79
DURHAM 27710 919 684-3314
U OF CHICAGO

HERBST, CHARLES ARTHUR, JR GS /CRS AC
UNC, CB 7210 67 67 74
DIV. OF GENERAL SURGERY
CHAPEL HILL 27599 919 966-5231
U OF MISSISSIPPI

HUTH, JAMES FRANK GS AC
3010 OLD CLINIC BLDG. CB #7210 75 76 89
UNC SCHOOL OF MEDICINE
CHAPEL HILL 27599 919 966-5221
U OF ROCHESTER

IGLEHART, JAMES DIRK GS /TS AC
BOX 3873, DUMC 75 78 86
DURHAM 27710 919 684-6133
HARVARD

JOHNSON, GEORGE, JR. GS /VS AC
UNC, DEPT. OF SURGERY 52 52 59
CB #7210
CHAPEL HILL 27599 919 966-3391
CORNELL U

KORUDA, MARK JOSEPH GS AC
SURGERY 210 BURNETT-WOMACK 81 83 89
UNC SCHOOL OF MEDICINE
CHAPEL HILL 27599 919 966-3391
YALE

LEIGHT, GEORGE STAPLES, JR. GS AC
2 SURREY LANE 72 79 81
DURHAM 27707 919 684-6849
DUKE

LOEHR, WALTER JOSEPH GS AC
2609 N. DUKE ST., STE. 402 63 64 75
DURHAM 27704 919 471-8439
CORNELL U

MANDEL, STANLEY ROBERT GS /TS AC
UNC, DEPT. OF SURGERY 229H 62 62 69
CHAPEL HILL 27599 919 966-3391
U OF VIRGINIA

MANKTELOW, ANNE GS R
1705-A ALLARD ROAD 77 89 90
CHAPEL HILL 27514 919 966-4131
U OF LONDON

MEYERS, WILLIAM CLARK GS /ABS AC
BOX 3041, DUMC 75 83 84
DURHAM 27710 919 684-6437
COLUMBIA U

MOYLAN, JOSEPH ANTHONY GS /VS AC
BOX 3947, DUMC 64 65 77
DURHAM 27710 919 684-2237
BOSTON U

PAPPAS, THEODORE NICK GS AC
BOX 3479, DUMC 81 81 90
DURHAM 27710 919 681-3442
OHIO STATE U

PATTERSON, HUBERT CLIFTON GS L/RT
602 S. COLUMBIA STREET 37 47 47
CHAPEL HILL 27514 919 968-3051
HARVARD

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

PEETE, WILLIAM P.J. GS AC
BOX 3506, DUMC 47 49 56
DURHAM 27710 919 684-3727
HARVARD

POSTLETHWAIT, RAYMOND W. GS L/RT
143 PINECREST RD. 37 47 56
DURHAM 27705 919 489-8865
DUKE

RUSSELL, HENRY EDWIN GS AC
3116 N. DUKE ST. 72 77 90
DURHAM 27704 919 479-6312
NORTHWESTERN U

RUTLEDGE, ROBERT GS /CC AC
UNC, DEPT. OF SURGERY 78 78 88
CAMPUS BOX 7050
CHAPEL HILL 27599 919 962-7555
U OF FLORIDA

SABISTON, DAVID COSTON, JR. GS /TS AC
DUKE UNIV. MED. CTR. 47 64 65
DURHAM 27710 919 684-2831
JOHNS HOPKINS

SCHIEBEL, HERMAN MAX GS /TS L
1020 ANDERSON ST. 33 38 40
DURHAM 27705 919 489-5109
JOHNS HOPKINS

SEIGLER, HILLIARD FOSTER GS AC
BOX 3966, DUMC 60 60 71
DURHAM 27710 919 684-3942
U OF NC

SHADDUCK, PHILLIP PRICE GS R
DUMC, BOX 31145 86 87 89
DEPT. OF SURGERY
DURHAM 27710 919 684-8111
U OF CALIF-LA

SHELDON, GEORGE FRANK GS /TRS AC
136 BURNETT-WOMACK BLDG. 61 62 84
UNC, DEPT. OF SURGERY CB 7050
CHAPEL HILL 27599 919 966-4052
U OF KANSAS

SHINGLETON, WILLIAM WARNER GS L
BOX 3814, DUMC 43 43 51
DURHAM 27710 919 684-2282
BOWMAN GRAY

STICKEL, DELFORD LEFEW GS AC
BOX 3917, DUMC 53 58 62
DURHAM 27710 919 684-6129
DUKE

THOMAS, COLIN GORDON, JR GS L
UNC,BURNETT-WOMACK 229H 43 52 52
CHAPEL HILL 27599 919 966-4597
U OF CHICAGO

TINSLEY, ELLIS A., JR. GS R
5905 TAHOE DR. 87 87 89
DURHAM 27713 919 966-4131
U OF NC

VAN TRIGT, PETER GS /TS AC
BOX 3235, DUMC 77 80 89
DURHAM 27710 919 684-3683
TULANE U

VERNON, WALTER BENSON GS AC
BOX 31097, DUMC 80 83 89
DURHAM 27710 919 681-5185
HARVARD

WATTS, CHARLES DEWITT GS /ABS L
510 SIMMONS STREET 43 45 67
DURHAM 27701 919 688-3391
HOWARD U

WELLS, WARNER LEE GS L/RT
104 MARKHAM DR. 38 41 46
CHAPEL HILL 27514 919 968-0069
DUKE

WILSON, JAMES STEPHENSON GS L
PO BOX 15249 37 47 47
DURHAM 27704 919 383-5531
DUKE

GYNECOLOGY

CHRISTAKOS, ARTHUR CHRIS GYN AC
BOX 2976, DUMC 55 56 65
DURHAM 27710 919 684-4647
MED U OF SC

CULTON, YANCEY GOELET, JR. GYN AC
2609 N. DUKE ST. STE. 503 56 56 68
DURHAM 27704 919 471-6832
DUKE

DANFORD, JERRY LEE GYN AC
PO BOX 15249 67 67 72
3901 ROXBORO RD.
DURHAM 27704 919 479-4100
DUKE

DROEGEMUELLER, WILLIAM GYN AC
908 WOODBINE DR. 60 61 85
CHAPEL HILL 27514 919 966-5281
U OF COLORADO

EASLEY, ELEANOR BEAMER GYN /OBS L/RT
750 WEAVER DAIRY RD., #141 34 40 40
CHAPEL HILL 27514 919 968-8229
DUKE

EASTERLING, WILLIAM E., JR. GYN /END AC
UNC, MACNIDER BLDG. CB 7000 56 56 64
CHAPEL HILL 27599 919 966-5214
U OF NC

MOORE, DAVID HARRY GYN /ON AC
UNC, DIV. OF GYN-ONC 82 82 86
CB 7570, MACNIDER BLDG.
CHAPEL HILL 27599 919 966-1195
INDIANA U

NEBEL, WILLIAM ARTHUR GYN AC
120 CONNER DR. STE. 101 62 62 69
PO BOX 3317
CHAPEL HILL 27514 919 942-8571
U OF NC

PODGER, KENNETH ARTHER GYN L/RT
7701 BEACH DRIVE 40 48 49
MYRTLE BEACH, SC 29577 803 449-3459
DUKE

SHAVENDER, EUGENE FRANK GYN AC
PO BOX 15249 68 68 78
3901 ROXBORO RD.
DURHAM 27704 919 479-4100
U OF NC

STOKES, THOMAS ANGIER, JR. GYN AC
2609 N. DUKE ST., STE. 302 55 55 60
DURHAM 27704 919 477-2183
DUKE

HEMATOLOGY

CAMPBELL, ELIZABETH E. HEM /IM C
143 LOBLOLLY LANE 82 84 89
CHAPEL HILL 27516 919 966-4431
DUKE

GABRIEL, DON ALEXANDER HEM /ON AC
UNC, DIV. OF HEM/ONCOLOGY 72 72 81
CHAPEL HILL 27599 919 966-4640
U OF NC

HERION, JOHN CARROLL HEM /IM AC
N. C. MEMORIAL HOSPITAL 53 53 57
CHAPEL HILL 27599 919 966-4555
HARVARD

LEFKOWITZ, JERRY B. HEM /PTH R
207-10 MELVILLE LOOP 83 84 88
CHAPEL HILL 27514 919 966-3311
MED COLL OF VA

PARKER, JOHN CURTIS HEM /IM AC
N. C. MEMORIAL HOSPITAL 61 67 68
CHAPEL HILL 27599 919 966-2467
YALE

ROBERTS, HAROLD ROSS HEM AC
UNC, CB #7035 55 55 62
416 BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-4305
U OF NC

HEAD AND NECK SURGERY

FISHER, SAMUEL RANKIN HNS /OTO AC
BOX 3805, DUMC 75 75 82
DURHAM 27710 919 684-4201
DUKE

HOBART, SETH GUILFORD, JR. HNS /MFS L/RT
1024 W. FOREST HILLS 50 55 55
DURHAM 27707 919 479-4100
U OF VIRGINIA

PATTERSON, CARL NORRIS HNS /FPS L
1110 W. MAIN STREET 44 48 48
DURHAM 27701 919 682-9341
U OF MARYLAND

SHOCKLEY, WILLIAM W. HNS /OTO AC
UNC, 610 BURNETT-WOMACK BLDG. 76 76 89
CB #7070
CHAPEL HILL 27599 919 966-3341
INDIANA U

INFECTIOUS DISEASES

COHEN, MYRON SCOTT ID AC
UNC,547 BURNETT-WOMACK, 229-H 74 74 85
CHAPEL HILL 27599 919 966-2536
RUSH MED COLL

FISCHER, JANET JORDAN ID /IM AC
N. C. MEMORIAL HOSPITAL 48 52 52
UNC CB 7030
CHAPEL HILL 27599 919 966-2536
JOHNS HOPKINS

GALLIS, HARRY ANTHONY ID /IM AC
BOX 3306, DUKE HOSPITAL 67 67 82
DURHAM 27710 919 684-3279
DUKE

SPARLING, PHILIP FREDERICK ID /IM AC
UNC, DEPT. OF MEDICINE 62 62 70
CHAPEL HILL 27599 919 966-4468
HARVARD

VAN DER HORST, CHARLES M. ID /IM AC
113 BIRCHCREST PL. 79 82 89
CHAPEL HILL 27516 919 966-2536
HARVARD

INTERNAL MEDICINE

ADAMS, KIRKWOOD F., JR. IM /CD AC
UNC, CB #7075 76 76 88
338 BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-4445
U OF NC

BARRY, DAVID WALTER IM /ID AC
BURROUGHS WELLCOME CO. 69 70 84
3030 CORNWALLIS ROAD
RESEARCH TRIANGLE PK 27709 919 248-4534
YALE

BELL, WILLIS HARVEY, II IM /PUD RT
2027 WAWA AVENUE 64 64 70
DURHAM 27707 919 493-1048
DUKE

BERNSTEIN, ROSLYN JULIE IM /NEP R
704 SLEEPY CREEK DR. 85 88 82
DURHAM 27713 919 684-8111
DUKE

BLYTHE, WILLIAM BREVARD IM /NEP AC
UNC, DEPT. OF MEDICINE 53 53 60
CHAPEL HILL 27599 919 966-2565
WASHINGTON U

BOMBERG, ROBERT BRYAN IM AC
JOHN UMSTEAD HOSPITAL 64 65 74
MEDICAL SERVICE UNIT
BUTNER 27504 919 575-7211
U OF COLORADO

BONDURANT, STUART IM AC
CB 7000, 125 MACNIDER BLDG. 53 53 80
UNC-CH SCHOOL OF MEDICINE
CHAPEL HILL 27599 919 966-4161
DUKE

BROMBERG, PHILIP ALLAN IM /PUD AC
724 CLI. SCI. BLDG. CB #7020 53 54 81
UNC, DIV. PULMONARY DISEASE
CHAPEL HILL 27599 919 966-2531
HARVARD

BROWN, DAVID WARREN IM AC
891 W. WILLOW DRIVE 67 68 81
CHAPEL HILL 27514 919 942-5123
U OF ROCHESTER

BROWN, JOHN MARK IM /EM AC
3605 SWEETEN CREEK RD. 84 85 87
CHAPEL HILL 27514 919 490-4406
U OF FLORIDA

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

BRYAN, JAMES ALEXANDER, II IM /HEM AC
NC MEMORIAL HOSPITAL 57 57 65
DEPT. OF MEDICINE
CHAPEL HILL 27599 919 966-2268
U OF PENN

CLAPP, JAMES ROBERT IM /NEP AC
BOX 2991, DUMC 57 57 82
DURHAM 27710 919 684-6674
U OF NC

COOPERBERG, CHARLES I. IM /NEP AC
2609 N. DUKE ST. STE. 604 82 83 88
DURHAM 27704 919 477-3005
U OF MONTERREY

CROMARTIE, WILLIAM JAMES IM /ID L/RT
204 WEAVER RD. 37 37 43
GLENDALE
CHAPEL HILL 27514 919 942-3493
EMORY U

DANIS, MARION IM /CCM AC
UNC DEPT. OF MEDICINE 75 78 86
5025-A OLD CLINIC BLDG.
CHAPEL HILL 27599 919 966-2276
U OF CHICAGO

DE CASTRO, CARLOS M, III IM R
BOX 3934, DUMC 85 88 88
DURHAM 27710 919 684-3725
U TX-SOU.WESTERN

DEWALT, JOSEPH LEO IM /ORS AC
IRIS LANE 54 54 59
CHAPEL HILL 27514 919 966-2281
U OF NC

DOWLING, MICHAEL SCOTT IM C
1301 FAYETTEVILLE ST. 83 83 91
DURHAM 27707 919 683-1316
CASEWESTERN RES

DUNHAM, CYNTHIA BYRD IM /NEP R
9420 BRIDLE SPUR ROAD 85 88 82
CHAPEL HILL 27516 919 942-2242
U OF NC

ESTES, EDWARD HARVEY, JR. IM /GER AC
3542 HAMSTEAD COURT 47 53 53
DURHAM 27707 919 684-6331
EMORY U

EVANS, ARTHUR T. IM AC
UNC CB #7490 82 86 89
HEALTH SERVICES RESEARCH CTR.
CHAPEL HILL 27599 919 966-1274
U OF TEXAS

FLETCHER, ROBERT HILLMAN IM /PH AC
UNC, DEPT. OF MEDICINE 66 68 79
CHAPEL HILL 27599 919 966-1274
HARVARD

FLETCHER, SUZANNE WRIGHT IM /PH AC
UNC, DEPT. OF MEDICINE 66 66 79
CHAPEL HILL 27599 919 966-2276
HARVARD

FORDHAM, CHRISTOPHER C., III IM /NEP AC
522 MORGAN CREEK RD. 51 51 56
CHAPEL HILL 27514 919 929-6946
HARVARD

GETTES, ANN CALDWELL IM AC
604 LAKESHORE LANE 58 58 89
CHAPEL HILL 27514 919 942-5708
TULANE U

GIANNETTO, LISA ANN IM AC
423 CAROLINA CIR. 86 86 88
DURHAM 27707 919 684-8111
LOYOLA U

GOLBY, MARY BLUE IM L/RT
2511 N. DUKE ST. 53 54 59
DURHAM 27704 919 477-5350
GEO WASHINGTON U

GOTTSCHALK, CARL WILLIAM IM /NEP AC
N. C. MEMORIAL HOSPITAL 45 52 52
CHAPEL HILL 27599 919 966-4567
U OF VIRGINIA

GREENFIELD, JOS. C., JR. IM /CD AC
BOX 3246, DUMC 56 57 83
DURHAM 27710 919 681-6147
EMORY U

GREGANTI, MAC ANDREW IM /GER AC
UNC, DEPT. OF IM 72 72 79
CHAPEL HILL 27599 919 966-2276
U OF MISSISSIPPI

HARE, ROY ALLEN IM AC
2609 N. DUKE ST., STE. 205 45 45 50
DURHAM 27704 919 471-8481
BOWMAN GRAY

HARPER, JAMES ROBINSON IM /CD AC
891 W. WILLOW DRIVE 60 60 67
CHAPEL HILL 27514 919 942-5123
U OF NC

HARRIS, TYNDALL PEACOCK IM L/RT
P. O. BOX 3118 50 51 57
CHAPEL HILL 27515 919 489-7371
DUKE

HEIZER, WILLIAM DAVID IM /GE AC
UNC, DEPT. OF MEDICINE 63 63 71
CHAPEL HILL 27599 919 966-2511
JOHNS HOPKINS

HENLEY, NANCY S. IM AC
3116 N. DUKE ST. 82 83 84
DURHAM 27704 919 479-6300
U OF NC

HIRSCH, STEVEN HAROLD IM AC
2609 N. DUKE ST. STE. 205 85 86 88
DURHAM 27704 919 220-5264
MED COLL OF GA

HOOLE, AXALLA JOHN IM AC
DIV.OF GENERAL MEDICINE 64 64 73
CB 7110, 5039 OLD CLINIC, UNC
CHAPEL HILL 27599 919 966-2276
MED U OF SC

HUANG, ANDREW TA-FU IM /HEM AC
BOX 3942, DUMC 64 71 90
DURHAM 27710 919 684-3127
TAIWAN U-TAIPEI

ISAACS, KIM LUISE IM /GE R
103 POLK'S TRAIL 84 85 84
CHAPEL HILL 27514 919 968-1597
U OF NY-ST BROOK

IZLAR, HENRY LEROY, JR. IM /CD L/RT
PO BOX 16999 48 53 55
4205 BEN FRANKLIN BLVD.
DURHAM 27704 919 682-5562
DUKE

KALLIANOS, JOHN A. IM /PD C
400 CRUTCHFIELD ST., STE. A 86 87 83
DURHAM 27704 919 471-4484
DUKE

KELLY, JAMES REGINALD IM AC
PO BOX 16999 70 71 76
4205 BEN FRANKLIN BLVD.
DURHAM 27704 919 682-5561
DUKE

KEMPNER, WALTER IM L/RT
1505 VIRGINIA AVE. 26 43 43
DURHAM 27705 919 286-2243
U OF HEIDELBERG

KIHM, JOHN TURNER IM AC
PO BOX 16999 84 85 88
4205 BEN FRANKLIN BLVD.
DURHAM 27704 615 322-2333
WAYNE STATE U

LINFORS, EUGENE WILLIAM IM AC
PO BOX 16999 71 71 84
4205 BEN FRANKLIN BLVD.
DURHAM 27704 919 477-6900
DUKE

LYLE, CARL BLACKBURN, JR. IM AC
5039 OLD CLINIC BLDG. 57 62 64
UNC CB #7110
CHAPEL HILL 27599 919 966-2276
COLUMBIA U

MANNING, ISAAC HALL, JR. IM L/RT
3901 HOPE VALLEY RD. 35 38 39
DURHAM 27707 919 489-2298
HARVARD

MANNING, STUART HALL IM AC
2609 N. DUKE ST., STE. 604 76 77 79
CENTRAL MEDICAL PARK
DURHAM 27704 919 220-5515
DUKE

MCCUTCHAN, JAMES HUTTON IM /ID AC
UNC STUDENT HEALTH-BOX 7074 61 61 69
CHAPEL HILL 27599 919 966-2281
JOHNS HOPKINS

MCKEE, LEWIS MIDDLETON IM L/RT
17 SURREY LN., HOPE VALLEY 33 34 34
DURHAM 27707 919 489-3262
TEMPLE U

MCNUTT, ROBERT A. IM AC
7110, 5039 OLD CLINIC BLDG. 75 75 89
UNC, DEPT. OF MEDICINE
CHAPEL HILL 27599 919 966-2276
MICHIGAN ST U

MILLER, MICHAEL JOHN IM /CD R
BOX 31040, DUMC 85 87 88
DURHAM 27710 919 684-8111
U OF PITTSBURGH

MIYAKE, CAROL ELIZABETH IM /END AC
10 SEDGEWOOD RD. 81 86 90
CHAPEL HILL 27514 919 479-6270
U OF MICHIGAN

NEELON, FRANCIS ALBERT IM /END AC
BOX 3021, DUMC 62 62 83
DURHAM 27710 919 684-4307
HARVARD

NEISH, DONALD DEWITT IM /GER AC
DOROTHEA DIX HOSPITAL 58 59 77
S. BOYLAN AVE.
RALEIGH 27611 919 733-5431
TEMPLE U

NELIUS, SIGRID J. VONRENNER IM /GPM AC
WEST DURHAM STATION 49 61 64
BOX 2899
DURHAM 27715 919 489-6949
LUDWIG MAXIMILLI

NEWBORG, BARBARA IM AC
1503 VIRGINIA AVE. 49 49 64
DURHAM 27705 919 286-2243
JOHNS HOPKINS

NIGALYE, RAJENDRA LAXMIKANT IM R
4600 UNIVERSITY DR., APT. 410 82 89 90
DURHAM 27707 919 489-6159

NUZUM, CLAUDE T. IM /GE AC
UNC, CB 7185, WING C, BOX 2 64 64 89
221-H MEDICAL SCHOOL
CHAPEL HILL 27599 919 966-2461
HARVARD

ORRINGER, EUGENE PAUL IM /HEM AC
UNC, DIV. OF HEM, CB 7600 69 71 81
3006 GENERAL CLI. RES.CENTER
CHAPEL HILL 27599 919 966-2467
U OF PITTSBURGH

PAGANO, JOSEPH STEPHEN IM /ID AC
UNC,LINEBERGER CANCER RES. 57 65 65
CHAPEL HILL 27599 919 966-3036
YALE

PALMER, JEFFRESS GARY IM /HEM AC
UNC, DEPT. OF MEDICINE 44 52 52
CB #7035 L
CHAPEL HILL 27599 919 966-3311
EMORY U

PENNINGTON, ROBERT CLAY, JR. IM /PD C
400 CRUTCHFIELD ST., STE. A 86 87 90
DURHAM ADULT/CHILDHOOD MED. PA
DURHAM 27704 919 684-8111
U OF NC

PICKARD, CARL GLENN, JR. IM AC
N. C. MEMORIAL HOSPITAL 62 62 69
CHAPEL HILL 27599 919 966-4205
U OF NC

PURVIS, JOSEPH D.,III IM /ON AC
3030 CORNWALLIS RD. 76 81 87
RESEARCH TRIANGLE PK. 27709 919 248-4642
JEFFERSON

PYRON, KATHARINE ANDREWS IM AC
5107 ORCHARD DR., STE. 205 68 68 90
DURHAM 27713 919 383-1518
U OF MISSOURI

RAY, VERONICA JOSEPHINE FORBES IM AC
1301 FAYETTEVILLE ST. 79 79 86
DURHAM 27707 919 683-1316
U OF NC

SIEKER, HERBERT OTTO IM /PUD L/RT
3949 PLYMOUTH RD. 48 50 55
DURHAM 27707 919 684-3907
WASHINGTON U

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

SMELZER, TIMOTHY HARVEY IM /PUD AC
62 69 69
891 W. WILLOW DRIVE
CHAPEL HILL 27514 919 942-5123
COLUMBIA U

SMILEY, MARGARET L. IM AC
78 84 88
BURROUGHS WELLCOME CO.
3030 CORNWALLIS RD.
RESEARCH TRI. PARK 27709
DUKE

SNYDERMAN, RALPH IM C
65 72 90
DUMC, BOX 3701
DURHAM 27710 919 684-2255
DOWNSTATE ME CTR

SORROW, JOHN MITCHELL, JR. IM /CD L/RT
46 46 54
PO BOX 2431
CHAPEL HILL 27515 919 929-7073
U OF PENN

SPANARKEL, MARYBETH IM /GE AC
79 82 88
PO BOX 16999
4205 BEN FRANKLIN BLVD.
DURHAM 27704 919 682-5561
DUKE

STACK, RICHARD SEAN IM /CD AC
76 86 89
106 ALDER PLACE
CHAPEL HILL 27514 919 681-5089
WAYNE STATE U

STAVE, GREGG M. IM /OM C
84 85 82
3434 LOCHN'ORA PARKWAY
DURHAM 27705 919 493-5647
DUKE

STEWART, ROBERT DOUGLAS IM /NTR AC
74 75 77
1901 HILLANDALE RD.
DURHAM 27705 919 383-0003
WEST VA U

STRATTON, JOHN PERLEY IM AC
61 61 69
5411 COLE MILL ROAD
DURHAM 27705 919 471-8446
HARVARD

SULLIVAN, ROBERT JOSEPH, JR. IM /FP AC
66 66 74
BOX 3003, DUMC
DURHAM 27710 919 684-2248
CORNELL U

SWIFT, MICHAEL RONALD IM AC
62 62 73
NCMH, CB #7250
CHAPEL HILL 27599 919 966-2266
NEW YORK U

TATE, DAVID ANDREW IM /CD AC
82 83 88
105 MARIN DR.
CHAPEL HILL 27516 919 966-5141
U OF NC

VAUGHAN, DANIEL PATRICK IM /ADL AC
71 72 75
UNC STUDENT HEALTH SERVICE
CAMPUS BOX 7470
CHAPEL HILL 27599 919 966-2281
WAYNE STATE U

WALKER, RICHARD ISLEY IM /HEM AC
54 54 62
N. C. MEMORIAL HOSPITAL
CHAPEL HILL 27599 919 966-4546
HARVARD

WARREN, CAMILLE MARIE IM /OM AC
80 81 82
IBM MEDICAL DEPT.523/BLDG 205
PO BOX 12195
RESEARCH TRIANGLE PK 27709 919 543-3120
U OF NC

WOOD, WILLIAM BAINSTER IM /PUD AC
56 56 63
UNC, DEPT. OF MED, CB 7020
CHAPEL HILL 27599 919 966-7668
U OF NC

WYSOR, WILLIAM GEOFFREY, JR. IM /GE AC
50 57 57
304 ELLIOTT RD.
CHAPEL HILL 27514 919 942-6162
U OF VIRGINIA

YARLEY, DEWEY HOBSON IM AC
56 56 65
2609 N. DUKE ST., STE. 205
DURHAM 27704 919 471-8481
U OF NC

NEUROLOGY

DAVIS, JAMES NORMAN N AC
65 65 84
V. A. MEDICAL CTR., NEUROLOGY
DURHAM 27705 919 286-6956
CORNELL U

EHLE, ALBERT LAWRENCE N AC
67 72 83
UNC, 751 BURNETT-WOMACK
CHAPEL HILL 27599 919 966-3707
U OF WASHINGTON

FARMER, THOMAS WOHLSEN N /IM L
41 42 52
UNC SCHOOL OF MEDICINE
751 BURNETT-WOMACK BLDG 229-H
CHAPEL HILL 27599 919 966-2526
HARVARD

GOETZL, UGO N /P AC
68 77 80
PO BOX 15249
3901 ROXBORO RD.
DURHAM 27704 919 479-4100
NEW YORK MED COL

HALL, COLIN DAVID N AC
66 73 75
UNC, DEPT. OF NEUROLOGY
CHAPEL HILL 27599 919 966-5522
U OF ABERDEEN

HAYWARD, JAMES NEIL N AC
54 55 76
UNC,751 CLINICAL SCI. BLDG.
CHAPEL HILL 27599 919 966-2526
TUFTS U

HEYMAN, ALBERT N /IM L
40 54 55
BOX 3203, DUMC
DURHAM 27710 919 684-2682
U OF MARYLAND

HOWARD, JAMES FRANCIS, JR. N AC
74 74 80
UNC,751 CLINICAL SCI. CB #7025
CHAPEL HILL 27599 919 966-5522
U OF VERMONT

HURWITZ, BARRIE J. N /IM AC
68 69 84
BOX 3184, DUMC
DURHAM 27710 919 684-4126
U-WITWATERSRAND

MANN, JOHN DOUGLAS N /IM AC
69 72 76
751 CLINICAL SCI. BLDG. 229-H
UNC SCHOOL OF MEDICINE
CHAPEL HILL 27599 919 966-2526
CORNELL U

MESSENHEIMER, JOHN ANDREW N AC
70 77 79
UNC, DEPT. OF NEUROLOGY
CHAPEL HILL 27599 919 966-3707
JOHNS HOPKINS

NG, KHYE WENG N /IM AC
56 68 72
PO BOX 15249
3901 ROXBORO RD.
DURHAM 27704 919 479-4100
U OF SINGAPORE

ROZEAR, MARVIN PRICE N AC
66 66 76
BOX 3849, DUKE UNIV. MED. CTR.
DURHAM 27710 919 684-8111
DUKE

NEUROPATHOLOGY

CRAIN, BARBARA JEAN NA /ATP AC
79 79 85
106 FOXRIDGE COURT
CHAPEL HILL 27514 919 684-5963
DUKE

NEPHROLOGY

FALK, RONALD JONATHAN NEP /IM AC
77 77 88
3034 OLD CLINIC BLDG./NEP.
UNC SCHOOL OF MEDICINE
CHAPEL HILL 27599
U OF NC

GITELMAN, HILLEL JONATHAN NEP /IM AC
58 66 67
UNC DEPT. OF MED. CB 7155
CHAPEL HILL 27599 919 966-2561
U OF ROCHESTER

GUNNELLS, JAMES CAULIE NEP /IM AC
56 56 79
BOX 2991, DUMC
DURHAM 27710 919 684-5038
MED U OF SC

GUTMAN, ROBERT ALLAN NEP /IM AC
62 73 83
2609 N. DUKE ST., STE. 604
DURHAM 27704 919 220-5761
U OF FLORIDA

LASSITER, WILLIAM EDMUND NEP /IM AC
54 54 60
UNC, DEPT. OF MED.
CB #7005
CHAPEL HILL 27599 919 966-4275
HARVARD

MATTERN, WILLIAM DOUGLAS NEP /IM AC
65 65 74
N. C. MEMORIAL HOSPITAL
CHAPEL HILL 27599 919 966-2561
COLUMBIA U

NUCLEAR MEDICINE

BEYTAS, EROL MARTIN NM /R C
81 82 90
BOX 3808, DUMC
DURHAM 27710 919 660-2711
VANDERBILT U

COLEMAN, RALPH EDWARD NM AC
68 68 83
DUMC, DEPT. OF RADIOLOGY
DURHAM 27710 919 681-2711
WASHINGTON U

WILKINSON, ROBERT HOLDEN, JR. NM /R AC
58 67 68
BOX 3949, DUMC
DURHAM 27710 919 681-2711
WASHINGTON U

WORKMAN, JOSEPH BERKELEY NM /IM AC
46 46 72
219 COUNTRY CLUB DRIVE
DURHAM 27712 919 383-5319
U OF MARYLAND

NEONATAL-PERINATAL MEDICINE

STILES, ALAN DAVIS NPM AC
77 82 90
UNC, DEPT. PED/NEONATOLOGY
CB 7220
CHAPEL HILL 27599 919 966-5063
U OF NC

NEUROLOGICAL SURGERY

BRONEC, PETER ROBERT NS AC
81 87 90
DURHAM CLINIC, PA
PO BOX 15249
DURHAM 27704 919 479-4100
DUKE

COOK, WESLEY ALLEN, JR. NS AC
63 63 72
DUMC, DIV. OF NEURO-SURGERY
DURHAM 27710 919 684-3582
U OF OREGON

FRIEDMAN, ALLAN HOWARD NS AC
74 80 81
BOX 3807, DUMC
DURHAM 27710 919 681-6421
U OF ILLINOIS

GARTMAN, JOHN JOSEPH, JR. NS R
86 00 90
UNC, 148 BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-1374
SUNY-SYRACUSE

KIHLSTROM, BRUCE LEE NS /GS AC
72 73 75
PO BOX 15249
3901 ROXBORO RD.
DURHAM 27704 919 383-5531
U OF NC

OAKES, WALTER JERRY NS AC
72 72 78
BOX 3272, DUMC
DURHAM 27710 919 684-5013
DUKE

ODOM, GUY LEARY NS L/RT
33 33 44
2812 CHELSEA CIRCLE
DURHAM 27707 919 489-2206
TULANE U

POWERS, STEPHEN KENT NS AC
77 78 84
UNC, 148 CLINICAL SCI. BLDG.
CHAPEL HILL 27599 919 966-1374
OHIO STATE U

PRICE, ROBERT EDWIN, JR. NS AC
64 64 72
PO BOX 15249
3901 ROXBORO ST.
DURHAM 27704 919 479-4100
U OF NC

WALTERS, BRADFORD BLAIR NS AC
79 80 86
UNC-NEUROSURGERY
BURNETT-WOMACK BLDG 229H
CHAPEL HILL 27599 919 966-1374
HARVARD

WILKINS, ROBERT HENRY NS AC
59 59 68
BOX 3807, DUMC
DURHAM 27710 919 684-2549
U OF PITTSBURGH

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

OBSTETRICS AND GYNECOLOGY

ALLEN, JAMES LATHAN OBG AC
65 65 74
209 E. CARVER ST.
DURHAM 27704 919 471-2273
EMORY U

ANDREWS, PAUL STEPHEN OBG AC
81 81 79
2609 N. DUKE ST. STE. 204
DURHAM 27704 919 471-8402
U OF NC

ARTIS, AVIS ADRIENA OBG AC
84 89 90
400-B CRUTCHFIELD
DURHAM 27705 919 471-1573
DUKE

BARKER, RUDY WATKINS OBG AC
67 67 74
2609 N. DUKE ST., STE. 204
DURHAM 27704 919 471-8402
U OF NC

BECKWITH, MARY KRISTINE OBG AC
82 82 86
209 E. CARVER ST.
DURHAM 27704 919 471-2273
U OF IOWA

BERGER, GARY STERLING OBG /PH AC
69 73 76
109 CONNER DR., STE. 2104
CHAPEL HILL 27514 919 968-4656
U OF ROCHESTER

BOWES, WATSON ALLEN, JR. OBG AC
59 60 86
DEPT. OF OBG
CB #7570,MACNIDER BLDG.,UNC
CHAPEL HILL 27599 919 966-1601
U OF COLORADO

BOWLES, FRANCIS NORMAN OBG L/RT
24 24 26
1019 FISH CROW ROAD
SANIBEL, FL 33957 813 472-4436
MED COLL OF VA

BRENNER, WILLIAM EDWARD OBG /NPM AC
62 62 69
101 CONNER DR. STE. 402
CHAPEL HILL 27514 919 942-0011
CASE WESTERN RES

BRYAN, PAT CHAPPELL OBG AC
83 86 90
120 CONNER DR., STE 101
CHAPEL HILL 27514 919 942-8571
U OF NC

CEFALO, ROBERT CHARLES OBG /NPM AC
59 61 81
430 LAKESHORE LANE
CHAPEL HILL 27514 919 966-1601
TUFTS U

CHESCHEIR, NANCY C. OBG AC
82 88 88
UNC, 214 MACNIDER BLDG.
DIV. MATERNAL-FETEL MED.
CHAPEL HILL 27599 919 966-1601
U OF NC

CLARK, VIVIAN E. OBG AC
81 82 86
120 CONNER DR., STE. 101
PO BOX 3317
CHAPEL HILL 27514 919 942-8571
BOSTON U

CLARKE-PEARSON, DANIEL L. OBG AC
75 79 88
BOX 3079, DUMC
DURHAM 27710 919 684-3765
CASE WESTERN RES

DINGFELDER, JAMES RAY OBG AC
65 66 72
180 PROVIDENCE RD.
THE TIBURON CTR.
CHAPEL HILL 27514 919 942-4100
JEFFERSON

DWANE, RICHARD JOHN OBG AC
62 63 89
BOX 3232, DUMC
DURHAM 27710 919 684-5123
GEORGETOWN U

FRIED, MICHAEL DAVID OBG AC
71 73 77
120 CONNER DR., STE. 101
PO BOX 3317
CHAPEL HILL 27514 919 544-3591
NEW YORK U

GOUBRAN, MICHEL OBG /END AC
62 63 77
4007 N. ROXBORO ST.
DURHAM 27704 919 471-4411
EIN SHAMS U

GRAHAM, WILLIAM ALEXANDER OBG L/RT
32 32 37
2247 CRANFORD ROAD
DURHAM 27706 919 489-5214
U OF PENN

GRANGER, RONALD EUGENE OBG AC
77 78 83
209 E. CARVER ST.
DURHAM 27704 919 471-2273
U OF CA-IRVINE

GUNTER, WM. B., JR. OBG AC
82 83 87
209 E. CARVER ST.
DURHAM 27704 919 471-2273
EMORY U

HAMMOND, CHARLES B. OBG /END AC
61 61 69
BOX 3853, DUMC
DURHAM 27710 919 684-3008
DUKE

HARRIS, CHARLES ODELL OBG AC
79 80 83
400 CRUTCHFIELD ST. STE. B
DURHAM 27704 919 471-1573
U OF NC

HERBERT, WILLIAM, N.P. OBG /NPM AC
72 74 79
CB #7570,214 MACNIDER BLDG.
UNC DEPT. OF OBG
CHAPEL HILL 27599 919 966-1601
BOWMAN GRAY

HULKA, JAROSLAV FABIAN OBG AC
56 67 67
UNC, DEPT. OF OB-GYN
CHAPEL HILL 27599 919 966-5287
COLUMBIA U

KILLAM, ALLEN PAGE OBG /NPM AC
60 60 83
4044 NOTTAWAY
DURHAM 27707 919 684-2876
U OF TEXAS

LAMBETH, WILLIAM RICK OBG AC
74 74 79
2609 N. DUKE STREET, STE. 204
DURHAM 27704 919 471-8402
BOWMAN GRAY

LANE, JOHN WESTON OBG AC
72 76 80
120 CONNER DR., STE. 101
PO BOX 3317
CHAPEL HILL 27514 919 942-8571
DUKE

LASSITER, RICHARD EDWARD OBG AC
65 65 71
120 CONNER DR., STE. 101
PO BOX 3317
CHAPEL HILL 27514 919 942-8571
U OF NC

LOBACH, MARY LEE HOWELL OBG AC
84 86 88
4415 VALLEY FORGE RD.
DURHAM 27705 919 471-2571
VANDERBILT U

MENARD, MARY KATHRYN OBG C
85 86 90
406 CATE HOUSE LN.
DURHAM 27707 919 966-1274
MED SCH-UMDNJ

MOHR, JACK ELMER OBG AC
53 57 57
706 WELLINGTON DRIVE
CHAPEL HILL 27514 919 967-1441
TUFTS U

PARKER, ROY TURNAGE OBG L
44 47 50
BOX 3097, DUMC
DURHAM 27710 919 684-2626
MED COLL OF VA

PEARCE, PHILIP HENDERSON OBG AC
60 60 67
209 E. CARVER ST.
DURHAM 27704 919 471-2273
DUKE

PEARSE, RICHARD LEHMER OBG /HYP L/RT
31 38 38
154 MONTROSE DR.
DURHAM 27707 919 489-4248
HARVARD

PEETE, CHARLES HENRY, JR. OBG AC
47 47 58
BOX 3192, DUMC
DURHAM 27710 919 684-2346
HARVARD

SCOTT, STEVEN MARTIN OBG /EM AC
74 74 79
3711 STONEYBROOK DR.
DURHAM 27705 919 383-0355
INDIANA U

SMITH, IRA Q. OBG AC
79 80 82
400 CRUTCHFIELD ST., STE. B
DURHAM 27704 919 471-1573
BOWMAN GRAY

SUMMERS, FRED DAVIDSON, JR. OBG RT
63 63 69
ROUTE #1, BOX 181
CHAPEL HILL 27514 919 929-2158
U OF NC

TALBERT, LUTHER MARCUS OBG /END AC
53 59 59
UNC, DEPT. OB OG/GYN,BOX 7570
CHAPEL HILL 27599 919 966-5438
U OF VIRGINIA

VAN DYKE, ALLEN H., JR. OBG /GYN AC
71 71 77
2609 N. DUKE ST., STE. 204
DURHAM 27704 919 471-8402
BOWMAN GRAY

YOWELL, ROBERT KLUTTZ OBG AC
61 61 69
2609 N. DUKE ST., STE. 204
DURHAM 27704 919 471-8402
DUKE

OCCUPATIONAL MEDICINE

AKWARI, ANNE MICHEAUX OM /IM AC
76 76 85
IBM CORPORATION 657/205
P. O. BOX 12195
RESEARCH TRIANGLE PK 27709 919 543-5508
HOWARD U

MOON, SAMUEL DAVID OM R
75 89 90
106 BASKERVILLE CIRCLE
CHAPEL HILL 27514 919 286-3232
MED COLL OF VA

POWELL, GWENDOLYN S. OM /IM AC
81 82 88
GLAXO INC.
FIVE MOORE DR.
RESEARCH TRIANGLE PK 27709 919 248-2332
U OF MIAMI

STOPFORD, WOODHALL OM /IM AC
69 70 80
BOX 2914, DUMC
DURHAM 27710 919 286-3232
HARVARD

ONCOLOGY

BRANTLEY, BERT ALTON, JR. ON AC
78 80 76
307 COLONY WOODS DRIVE
CHAPEL HILL 27514 919 684-3695
DUKE

BRENCKMAN, WAYNE D., JR. ON /IM AC
63 66 90
GLAXO, INC.
5 MOORE DR.
RESEARCH TRIANGLE PK 27709 919 941-4259
YALE

CLENDENINN, NEIL J. ON /IM AC
77 78 88
5910 TREETOP RIDGE
DURHAM 27705 919 248-4436
NEW YORK U

DAVIS, WALTER ETCHELLS ON /HEM AC
66 66 75
PO BOX 15249
3901 N. ROXBORO RD.
DURHAM 27704 919 479-4100
DUKE

GOCKERMAN, JON PAUL ON /HEM AC
67 71 83
DUKE COMP. CARE CTR.
P. O. BOX 3877
DURHAM 27710 919 684-6283
U OF CHICAGO

GODLEY, PAUL A. ON /IM R
84 87 88
299 SUMMERWALK CIR.
CHAPEL HILL 27514 919 966-4431
HARVARD

OZER, HOWARD ON /IG AC
75 77 86
UNC 3019 OLD CLINIC BLDG. 226H
CHAPEL HILL 27599 919 966-4431
YALE

OPHTHALMOLOGY

ANDERSON, WILLIAM BANKS, JR. OPH AC
56 56 60
DUKE UNIVERSITY EYE CENTER
DURHAM 27710 919 684-3771
HARVARD

BELL, DOROTHY MCFARLAND OPH AC
75 75 80
1110 W. MAIN ST.
DURHAM 27701 919 682-9341
U OF CHICAGO

BRYAN, JAMES A., III OPH AC
83 89 90
110 CONNER DR. STE. #2
CHAPEL HILL 27514 919 942-8701
U OF NC

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

BUCKLEY, EDWARD GEORGE OPH /PD AC 77 78 79
BOX 3802, DUKE EYE CENTER
DURHAM 27705 919 684-6084
DUKE

CHANDLER, ARTHUR CECIL, JR. OPH 59 59 66
PO BOX 15249
3901 ROXBORO RD.
DURHAM 27704 919 479-4100
DUKE

CHRISTENSEN, FRANK HOWARD OPH /PS AC 76 76 83
109 CONNER DR., STE. 2207
CHAPEL HILL 27514 919 933-1294
ST LOUIS U

CLINE, JOHN WILLIAM OPH AC 58 63 68
1110 W. MAIN STREET
DURHAM 27701 919 682-9341
MED COLL OF VA

COBO, LIONEL MICHAEL OPH AC 75 78 81
BOX 3802, DUKE EYE CTR.
DURHAM 27710 919 684-3799
HARVARD

COHEN, KENNETH LEE OPH AC 71 72 79
UNC DEPT. OF OPH, CB #7040
617 CLINICAL SCI BLDG.
CHAPEL HILL 27599 919 966-5296
U OF ILLINOIS

DAWSON, ROBERT EDWARD OPH L/RT 43 43 69
512 SIMMONS STREET
DURHAM 27701 919 682-7175
MEHARRY MED COLL

DEJUAN, EUGENE, JR. OPH AC 79 80 85
BOX 3802, DUKE EYE CENTER
DURHAM 27710 919 684-5631
U OF SOU ALA

DUTTON, JONATHAN JOSEPH OPH /ON AC 77 77 83
BOX 3802, DUKE EYE CENTER
DURHAM 27710 919 684-3142
WASHINGTON U

EIFRIG, DAVID ERIC OPH AC 60 60 80
UNC, DEPT. OF OPHTHALMOLOGY
CHAPEL HILL 27599 919 966-5296
JOHNS HOPKINS

FOULKS, GARY NEAL OPH AC 70 71 78
BOX 3802, DUKE UNIV. EYE CTR.
DURHAM 27710 919 684-6417
COLUMBIA U

FRIEDLAND, BETH R. OPH /PA 79 84 84
10 PARK PLAZA, STE. #3
PO BOX 12765
RESEARCH TRIANGLE PK 27709
U OF FLORIDA

GRIMSON, BAIRD SANFORD OPH AC 69 69 77
UNC CB #7040
733 BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-5296
DUKE

HALE, LESLIE MORGAN OPH AC 61 61 68
110 CONNER DR. STE. #2
CHAPEL HILL 27514 919 942-8701
U OF NC

HALE, ROBERT VERNON OPH AC 67 67 75
110 CONNER DR. STE. #2
CHAPEL HILL 27514 919 942-8701
U OF NC

HEATH, DIANA HEATHER OPH R 87 00 89
4600 UNIVERSITY DR. APT. 1117
DURHAM 27707 919 684-6611
U OF MIAMI

HEDGPETH, EDWARD MCGOWAN, JR. OPH AC 62 62 69
1110 W. MAIN STREET
DURHAM 27701 919 682-9341
U OF NC

JAFFE, GLENN JAY OPH AC 83 84 90
BOX 3802, DUKE UNIV. EYE CTR.
DURHAM 27701 919 684-4458
U OF CALIFORNIA

KYLSTRA, JAN ANDREW OPH AC 83 84 90
NC. MEMORIAL HOSP.
DEPT. OF OPH
CHAPEL HILL 27599 919 966-5296
DUKE

MACHEMER, ROBERT OPH AC 59 69 78
BOX 3802, DUMC
DURHAM 27710 919 684-5846
U FREIBURG,GERM

MCCRACKEN, JOSEPH STUART OPH AC 75 77 82
2609 N. DUKE ST., STE. 802
DURHAM 27704 919 220-5439
DUKE

MCCUEN, BROOKS WALTON, II OPH AC 74 75 80
BOX 3802, DUMC
DURHAM 27710 919 684-6749
COLUMBIA U

MCPHERSON, SAMUEL DACE, JR. OPH L 43 48 48
1110 W. MAIN STREET
DURHAM 27701 919 682-9341
JOHNS HOPKINS

MEYER, GEORGE WRIGHT OPH L 52 57 59
1106 HILLANDALE ROAD
DURHAM 27705 919 286-9663
DUKE

MITCHELL, CALVIN HARRISON OPH AC 58 58 86
BOX 3802, DUKE UNIV. EYE CTR.
DURHAM 27710 919 684-3771
DUKE

MOORE, LAWRENCE WHITE, JR. OPH AC 63 63 71
1110 W. MAIN STREET
DURHAM 27701 919 682-9341
DUKE

PERRY, DWIGHT DEAN OPH AC 80 81 85
PO BOX 15249
3901 ROXBORO RD.
DURHAM 27704 919 682-7175
U OF NC

PRICE, ROBERT EUGENE OPH C 85 89 91
109 CONNER DR., STE. 2207
CHAPEL HILL 27514 919 933-1294
EAST TENN STATE

SAPPENFIELD, DAVID LUTHER OPH AC 84 85 82
MCPHERSON HOSPITAL
1110 W. MAIN ST.
DURHAM 27701 919 682-9341
U OF NC

SHIELDS, MILTON BRUCE OPH AC 66 67 76
DUKE UNIVERSITY EYE CENTER
DURHAM 27710 919 684-2841
U OF OKLAHOMA

TIEDEMAN, JAMES STUART OPH AC 77 80 83
BOX 3802, DUMC
DURHAM 27710 919 684-3090
DUKE

TURNER, LARRY OPH /OTO L 39 41 47
1110 W. MAIN STREET
DURHAM 27701 919 682-9341
DUKE

WADSWORTH, JOSEPH A.C. OPH L/RT 39 65 65
112 MONTROSE RD.
DURHAM 27707
DUKE

WILCOX, WILLIAM DAVID OPH AC 70 71 84
116 CRUTCHFIELD ST.
DURHAM 27704 919 477-8050
U OF PITTSBURGH

YOUNG, NOEL WILLIAM, JR. OPH AC 63 63 70
2609 N. DUKE STREET
DURHAM 27704 919 471-8495
DUKE

ORTHOPEDIC SURGERY

ALMEKINDERS, LOUIS C. ORS /SM AC 80 84 89
UNC, DIV. OF ORTHO. SURG.
CB #7055
CHAPEL HILL 27599 919 966-2030
ERASMUS UNIV

BAKER, LENOX DIAL ORS L/RT 34 35 37
BOX 3706, DUMC
DURHAM 27710 919 684-2628
DUKE

BASSETT, FRANK HOUSTON, III ORS AC 57 58 64
DUKE UNIV. MED. CTR.
DURHAM 27710 919 684-4378
U OF LOUISVILLE

BRASHEAR, HARRY ROBERT, JR. ORS L/RT 45 53 53
N. C. MEMORIAL HOSPITAL
CHAPEL HILL 27599 919 966-2030
U OF CALIFORNIA

BRUCH, RICHARD FRANKLIN ORS /GER AC 72 73 77
TRIANGLE ORTHOPAEDIC ASSOC.
2609 N. DUKE STREET
DURHAM 27704 919 220-5255
U OF ILLINOIS

BUGG, EVERETT IRVING, JR. ORS L 37 38 46
RT. #2, BOX 143
PITTSBORO 27312 919 286-1249
JOHNS HOPKINS

BYNUM, DONALD K., JR. ORS /HS AC 229-H 76 76 83
245 BURNETT-WOMACK BLDG.
UNC SCHOOL OF MEDICINE
CHAPEL HILL 27599 919 966-2030
U OF TX-HOUSTON

CLIPPINGER, FRANK WARREN, JR. ORS AC 52 54 58
BOX 3935, DUMC
DURHAM 27710 919 684-4229
WASHINGTON U

COONRAD, RALPH WOODWARD ORS /HS AC 47 50 55
1828 HILLANDALE ROAD
DURHAM 27705 919 286-1249
DUKE

DAHNERS, LAURENCE E. ORS AC 78 79 84
237 BURNETT-WOMACK BLDG.
CB 7055, UNC
CHAPEL HILL 27599 919 966-2039
U. OF ARIZONA

DERIAN, THOMAS C. ORS AC 81 85 87
PO BOX 15249
DURHAM CLINIC, PA
DURHAM 27704 919 479-4100
U OF MISSISSIPPI

DIMMIG, THOMAS A. ORS AC 76 77 84
2609 N. DUKE ST.
DURHAM 27704 919 471-8431
DUKE

FITCH, ROBERT DOUGLAS ORS /PDS AC 76 82 85
BOX 2911, DUMC
DURHAM 27710 919 684-3104
DUKE

FRANK, JAMES LAWRENCE ORS AC 65 65 73
1828 HILLANDALE ROAD
DURHAM 27705 919 286-1249
DUKE

GARRETT, WILLIAM ELWOOD, JR. ORS AC 76 82 83
BOX 3435, DUMC
DURHAM 27710 919 684-4502
DUKE

GILMER, PETER WINSTON ORS AC 80 82 86
2609 N. DUKE ST.
DURHAM 27704 919 220-5255
U OF VIRGINIA

GLASSON, JOHN ORS L 43 51 51
615 SWIFT AVE.
DURHAM 27701 919 489-5110
CORNELL U

GOLDNER, JOSEPH LEONARD ORS /HS L 43 50 50
BOX 3706, DUMC
DURHAM 27710 919 684-2628
U OF NEBRASKA

GOLDNER, RICHARD DOUGLAS ORS /HS AC 74 74 84
BOX 3480, DUMC
DURHAM 27710 919 684-6461
DUKE

GREENE, WALTER BLAIR ORS /PDS AC 72 72 79
UNC, 237 BURNETT-WOMACK
CHAPEL HILL 27599 919 966-3691
U OF NC

GRUBB, STEPHEN ALLEN ORS AC 74 75 83
101 CONNER DR. STE. 200
CHAPEL HILL 27514 919 929-7796
NORTHWESTERN U

HARDAKER, WILLIAM T., JR. ORS AC 73 73 84
BOX 3956, DUMC
DURHAM 27710 919 684-5334
DUKE

HARRELSON, JOHN MILES ORS /PTH AC 65 65 74
BOX 3023, DUMC
DURHAM 27710 919 684-5304
DUKE

HENDERSON, RICHARD C. ORS AC 80 81 86
UNC, 237 BURNETT-WOMACK
DIV. OF ORS, 229H
CHAPEL HILL 27599 919 966-3691
U OF CHICAGO

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

HOOTEN, JAMES PHILMON, JR. ORS R
10602 HORTON AVE. 87 88 85
DOWNEY, CA 90241 813 979-1559
U OF NC

KENTER, KEITH ORS R
3030 GLENDALE 90 00 90
DURHAM 27704 919 471-4704
U OF MISSOURI

LANG, STEPHEN NORMAN ORS AC
BOX 2919, DUMC 65 65 72
DURHAM 27710 919 684-3949
U OF ILLINOIS

LIEBELT, RALPH ARTHUR ORS AC
2609 N. DUKE ST.,STE. 301 82 87 90
DURHAM 27704 919 471-8431
CASE WESTERN RES

LINCOLN, CLINTON ROBERT ORS AC
1828 HILLANDALE ROAD 60 63 68
DURHAM 27705 919 286-1249
MED COLL OF VA

MALLON, WILLIAM JAMES ORS C
2609 N. DUKE ST. 84 84 91
DURHAM 27705 919 220-5255
DUKE

MCCOLLUM, DONALD EUGENE ORS AC
BOX 2919, DUMC 53 53 62
DURHAM 27710 919 684-4055
BOWMAN GRAY

NUNLEY, JAMES ALBERT, II ORS /HS AC
BOX 2919, DUMC 73 73 82
DURHAM 27710 919 684-4033
TULANE U

PRESTON, EDWIN THORNTON ORS AC
101 CONNER DR., STE. 200 60 60 70
CHAPEL HILL 27514 919 942-3171
DUKE

RANEY, RICHARD BEVERLY, SR. ORS L/RT
N. C. MEMORIAL HOSPITAL 30 34 35
CHAPEL HILL 27599 919 966-2030
HARVARD

RICHARDSON, WM. JAMES ORS AC
BOX 3077, DUMC 77 77 88
DURHAM 27710 919 684-5711
EASTERN VA

SOMERS, WILLIAM ALAN ORS AC
PO BOX 15249 72 72 81
3901 ROXBORO RD.
DURHAM 27704 919 479-4100
DUKE

SUH, PAUL BOKSUK ORS AC
UNC, 242 BURNETT-WOMACK BLDG. 83 84 89
CHAPEL HILL 27599 919 966-3340
U OF NC

TAFT, TIMOTHY NED ORS AC
UNC, CB 7055 69 72 73
237 BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-2039
U OF MISSOURI

URBANIAK, JAMES RANDOLPH ORS /HS AC
BOX 2912, DUKE HOSPITAL 62 62 70
DURHAM 27710 919 684-2476
DUKE

WHITE, WILLIAM BRADLEY ORS AC
1828 HILLANDLE RD. 83 83 90
DURHAM 27705 919 286-1249
U TX-SOU.WESTERN

WILSON, FRANK CRANE ORS AC
UNC, CB #7055 54 64 64
CHAPEL HILL 27599 919 966-3359
MED COLL OF GA

WRIGHT, PAUL HARLAN ORS AC
1901 HILLANDALE ROAD 74 74 73
DURHAM 27705 919 383-1511
BOWMAN GRAY

OTOLARYNGOLOGY

BIGGERS, WILLIAM PAUL OTO /A AC
610 BURNETT-WOMACK CB 7070 63 63 69
UNC SCHOOL OF MEDICINE
CHAPEL HILL 27599 919 966-3341
U OF NC

CLARK, CHARLES EDWARD, III OTO /RHI AC
2609 N. DUKE ST. STE. 306 68 69 77
DURHAM 27704 919 471-8700
U OF MICHIGAN

COLE, TOLLIE BOYCE OTO AC
BOX 3805, DUMC 62 62 69
DURHAM 27710 919 684-6819
U OF NC

FARMER, JOSEPH C., JR. OTO /OT AC
DUKE, DEPT. OF SURGERY 62 62 70
DURHAM 27710 919 684-6357
DUKE

FERGUSON, BERRYLIN JUNE OTO /A AC
PO BOX 15249 80 81 85
3901 ROXBORO RD.
DURHAM 27704 919 479-4100
DUKE

FERGUSON, GEORGE BURTON OTO L
1110 W. MAIN STREET 32 32 38
DURHAM 27701 919 682-9341
JEFFERSON

FISCHER, NEWTON D. OTO /HNS AC
UNC SCHOOL OF MEDICINE 45 52 52
CHAPEL HILL 27599 919 966-3341
U OF TEXAS

GERBE, RONALD WILLIAM OTO /HNS AC
109 CONNER DR., STE. 207 76 76 82
CHAPEL HILL 27514 919 967-5599
U OF NC

HUDSON, EDWARD VALENTINE OTO AC
PO BOX 15249 62 62 73
3901 ROXBORO RD.
DURHAM 27704 919 479-4100
BOWMAN GRAY

HUDSON, WILLIAM RUCKER OTO AC
DUKE UNIV. MED. CTR. 51 51 53
DURHAM 27710 919 684-3834
BOWMAN GRAY

JANICKI, PETER T. OTO /HNS R
DUMC, DIV. OF OTO, BOX 3805 86 86 88
DURHAM 27710 919 684-8111
BAYLOR

KAPPELMANN, RICK BERNARD OTO AC
3111 BUCKINGHAM RD. 83 84 90
DURHAM 27707 919 490-8743
U OF MISSOURI

KENAN, PATRICK DAN OTO AC
DUKE, DIV. OF OTOL. 59 59 65
DURHAM 27710 919 684-5238
DUKE

MANN, CHARLES HAYES OTO AC
3938 DOVER ROAD 66 68 82
DURHAM 27707 919 682-9341
WEST VA U

McELVEEN, JOHN T., JR. OTO AC
BOX 3805, DUMC 78 79 87
DURHAM 27710 919 684-2475
U OF NC

MOLTER, DAVID W. OTO R
2730 MONTGOMERY ST. 88 88 83
DURHAM 27705 919 684-8111
DUKE

PILLSBURY, HAROLD C.,III OTO /HNS AC
UNC, CB #7070 72 72 75
BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-3341
GEO WASHINGTON U

WEISSLER, MARK C. OTO /HNS AC
UNC 610 BURNETT-WOMACK BLDG. 80 80 86
CB #7070
CHAPEL HILL 27599 919 966-3341
BOSTON U

PSYCHIATRY

ALLEN, ELIZABETH P AC
PO BOX 88 58 58 71
ELIZABETHTON, TN 37643 615 542-6552
U OF TENNESSEE

ASCHER, JOHN ALBERT P AC
3030 CORNWALLIS RD. 80 82 90
RESEARCH TRIANGLE PK 27709 919 248-3259
U OF NC

BAKEWELL, WILLIAM ERNEST, JR. P AC
N. C. MEMORIAL HOSPITAL 49 56 61
CHAPEL HILL 27599 919 966-4551
MCGILL U

BRAASCH, ERNEST R. P /PYA AC
4114 DEEPWOOD CIRCLE 70 73 87
DURHAM 27707 919 493-2217
DOWNSTATE ME CTR

BRANTLEY, JEFFREY GARLAND P AC
1109 HUNTSMAN DR. 77 77 83
DURHAM 27713 919 682-9296
U OF NC

BRESLIN, MARIANNE S. P /PYM L/RT
1704 MICHAUX ROAD 46 60 61
CHAPEL HILL 27514 919 493-2657
DUSSELDORF GER

BRODIE, HARLOW KEITH HAMMOND P AC
DUKE UNIV. ALLEN BLDG. RM 207 65 65 75
DURHAM 27706 919 684-2424
COLUMBIA U

BUSSE, EWALD WILLIAM P /GER L
BOX 2948, DUMC 42 42 54
DURHAM 27710 919 684-3416
WASHINGTON U

CARTER, JAMES HARVEY P
MENTAL HYGIENE CLINIC 66 66 79
WOMACK MEDDAC
FT. BRAGG 28307 919 684-6102
HOWARD U

COLEY, SILAS BODIE, JR. P /N AC
815 KENMORE ROAD 65 65 69
CHAPEL HILL 27514 919 929-0326
U OF NC

CORNISH, MARY HELD P AC
706 E. FOREST HILLS BLVD. 83 84 88
DURHAM 27707 919 682-9296
MED U OF SC

DORFMAN, MARGARET JEANNE P AC
6320 QUADRANGLE DR., STE. 330 77 81 82
CHAPEL HILL 27514 919 490-6474
TUFTS U

ENRIGHT, KATHERINE ANNE P /IM R
BOX 3492, DUMC 85 87 84
DURHAM 27710 919 684-8111
DUKE

FOREST, KARA MICHELLE P R
113 SNOWCREST TRAIL 90 00 90
DURHAM 27707 919 489-6562
U TX-SOU.WESTERN

FRICK, DONNA ELLIOTT P AC
109 CONNER DR.,BLDG #3,STE.203 74 74 85
CHAPEL HILL 27514 919 933-5600
U OF NC

GIANTURCO, DANIEL THOMAS P AC
2925 FRIENDSHIP ROAD 60 66 67
DURHAM 27705 919 684-4335
ST U OF NY-BUFF

GIRAGOS, JOHN G. P /PYA AC
20 W. COLONY PL., STE. 260 63 63 75
DURHAM 27705 919 493-1810
AMER.U OF BEIRUT

GREEN, ROBERT LEE, JR. P /N AC
4100 CHAPEL HILL RD. 46 56 80
#1 INNISFREE
DURHAM 27707 919 489-8547
HAHNEMANN

GUALTIERI, C. THOMAS P /CHP AC
212 W. ROSEMARY ST. 69 70 77
CHAPEL HILL 27516 919 933-2000
COLUMBIA U

HAMBY, GEORGE WALTERS P AC
DOCTOR'S BUILDING, WILLOW DR. 58 58 65
CHAPEL HILL 27514 919 929-6155
U OF NC

HAMMETT, ELLIOTT BRIAN P AC
V.A. HOSPITAL 116-A 66 66 73
DURHAM 27705 919 286-0411
DUKE

HOLLISTER, WILLIAM GRAY P /GPM L/RT
2008 N. LAKESHORE DRIVE 41 65 67
CHAPEL HILL 27514 919 942-2870
U OF NEBRASKA

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

UEHOLT, THERESE MARIE P R
NC MEMORIAL HOSP-PSYCH. 87 87 00
CHAPEL HILL 27599 919 481-1875
U OF SOU CALIF

RIGARAY, PETER JOSEPH P AC
JOHN UMSTEAD HOSPITAL 55 57 64
BUTNER 27509 919 575-7233
NAT U OF MEXICO

ANOWSKY, DAVID S. P AC
UNC, DEPT. OF PSYCHIATRY 64 64 87
231 MEDICAL SCH. WING B 207H
CHAPEL HILL 27599 919 966-4738
U OF CALIFORNIA

ECK, LIDA MORAWETZ P AC
800 EASTOWNE DR., STE. 204 77 81 82
CHAPEL HILL 27514 919 493-5329
DUKE

OHNSON, BARBARA ANN P R
4408 AMERICAN DR. 90 00 90
DURHAM 27705 919 383-9806
U OF MINN

ERAM, EMILY A. HALPERN P R
316 SEVERIN STREET 88 00 85
CHAPEL HILL 27516 919 966-4131
U OF NC

EVITT, STEPHEN ROBERT P AC
500 EASTOWNE DR., STE. 202 76 77 80
CHAPEL HILL 27514 919 942-8761
CASE WESTERN RES

IPTON, BARBARA STEINER P L/RT
919--109TH AVE., NE, APT. 1204 43 59 60
BELLEVUE, WA 98004 206 646-3882
U OF ILLINOIS

IPTZIN, MYRON BENNETT P AC
UNC STUDENT HEALTH SERVICE 59 65 65
BOX 7470
CHAPEL HILL 27599 919 966-3658
U OF ROCHESTER

IVINGSTON, NANCY T. P /PYA AC
500 EASTOWNE DR. 72 73 89
CHAPEL HILL 27514 919 493-3597
DUKE

LEWELLYN, CHARLES E., JR. P AC
3308 CHAPEL HILL BLVD. #110 46 55 56
DURHAM 27707 919 493-7298
MED COLL OF VA

MACHEMER, CHRISTINE ANNA P AC
BOX 3125, DUMC 59 61 79
DURHAM 27710 919 684-5772
U FREIBURG,GERM

MALTBIE, ALLAN ARMSTRONG P /PYA AC
BOX 3837, DUMC 69 70 73
DURHAM 27710 919 684-5217
EMORY U

MCCARTNEY, CHERYL FAINTUCH P AC
UNC, CB #7160 71 72 80
CHAPEL HILL 27599 919 966-4551
NORTHWESTERN U

MCGEE, MARK FLETCHER P R
1511 ECHO ROAD 89 00 89
DURHAM 27707 919 493-1352
OHIO STATE U

MONROE, JOHN THADDEUS, JR. P /PYA AC
1829 E. FRANKLIN ST., 1100-A 55 55 62
CHAPEL HILL 27514 919 967-5289
U OF NC

NEELEY, BRUCE CARLTON P /PYM AC
1911 HILLANDALE RD. STE. 1040 75 77 85
DURHAM 27705 919 383-1516
MED U OF SC

NEMEROFF, CHARLES BARNET P AC
BOX 3859, DUMC 81 81 78
DURHAM 27710 919 684-6562
U OF NC

PARKER, JOSEPH B., JR. P /PYM L/RT
24 STONERIDGE CIR. 41 41 65
DURHAM 27705 919 684-2415
U OF TENNESSEE

PEREZ-REYES, MARIO P AC
107 HUNTER HILL PLACE 52 67 67
CHAPEL HILL 27514 919 933-9829
NAT U OF MEXICO

PRANGE, ARTHUR JERGEN, JR. P AC
NCMH, DEPT. OF PSYCHIATRY 50 58 58
CHAPEL HILL 27599 919 966-1480
U OF MICHIGAN

PRATHER, DONNA LYNN P AC
311 BLUERIDGE RD. 78 79 78
CARRBORO 27510 919 929-6519
U OF NC

RECKLESS, JOHN BRIAN P /PYM ER
1816 FRONT ST., STE. 310 54 60 62
DURHAM 27705 919 383-1502
U BIRMINGHAM ENG

RHOADS, JOHN MCFARLANE P /PYA L/RT
163 MONTROSE 43 56 57
DURHAM 27707 919 493-7847
TEMPLE U

ROCKWELL, WILLIAM J. K. P AC
DUKE, DEPT. OF PSYCHIATRY 61 61 68
DURHAM 27710 919 684-3073
DUKE

ROYAL, BILLY WILLIAMSON P AC
PO BOX 2387 58 58 62
500 EASTOWNE DR., STE. 202
CHAPEL HILL 27516 919 967-9870
BOWMAN GRAY

SEIBEL, KATHLEEN MARIE P AC
300 EASTOWNE, STE. 215 85 86 89
CHAPEL HILL 27514 919 493-1466
U OF MINN

SHIMM, CYNIA BROWN P /PYA AC
2609 N. DUKE ST. STE. 103 50 54 76
DURHAM 27704 919 471-3487
YALE

SHUGART, MARGARET ANN P /CHP C
329 RIDGECREST DR. 84 84 84
CHAPEL HILL 27514 919 688-9003
MED COLL OF VA

SOLTYS, JOHN JOSEPH P /CHP AC
707 GREENWOOD RD. 59 61 79
CHAPEL HILL 27514 919 966-5277
HARVARD

SPENCER, ROGER FELIX P /PYA AC
UNC HOSPITALS 59 63 63
201 SOUTH WING, CB 7160
CHAPEL HILL 27599 919 966-4622
HARVARD

SPRUILL, THOMAS RAYFORD P AC
1101 N. DUKE ST. 83 83 86
DURHAM 27701 919 687-4224
LA STATE U

STEBBINS, NANCY K. G. P R
#3 MEETINGHOUSE LANE 87 00 87
DURHAM 27707 919 493-8230
U OF TX-HOUSTON

SWIFT, RONNIE GORMAN P AC
1004 MT. CARMEL CHURCH RD. 75 76 81
CHAPEL HILL 27514 919 933-5857
U OF NC

TOLLEY, AUBREY GRANVILLE P L/RT
110 LAUREL HILL ROAD 52 52 56
CHAPEL HILL 27514 919 942-5754
U OF VIRGINIA

VARIA, INDIRA MAHESH P AC
BOX 3889, DUMC 68 76 81
DURHAM 27710 919 929-6726
M P SHAH MED COL

WALTERS-SCHERRER, BARBARA A. P /GP C
100 FOREST RIDGE 85 85 86
CHAPEL HILL 27514 919 968-4652
MI. ST U-OST MED

WEISS, JAMES RICHARD P /PYA AC
111 CLOISTER CT., STE. 112 73 76 79
CHAPEL HILL 27514 919 489-2671
LA STATE U

WELLS, JAMES SHELTON, JR. P /PYM AC
5024 BOULDER RUN ROAD 77 78 75
HILLSBOROUGH 27278 919 967-6353
U OF NC

WHANGER, ALAN DUANE P AC
1712 WOODBURN ROAD 56 56 70
DURHAM 27705 919 684-2545
DUKE

WILSON, WILLIAM PRESTON P L/RT
P. O. BOX 2347 47 50 53
BURLINGTON 27216 919 229-6049
DUKE

WINTON, ROBERT EMMETT P AC
1811 CHAPEL HILL RD. 72 78 90
DURHAM 27707 919 493-4397
VANDERBILT U

ZARZAR, NICHOLAS S. P C
4215 TALCOTT DR. 86 86 86
DURHAM 27707 919 382-0135
U OF NC

CLINICAL PHARMACOLOGY

SPILKER, BERTRAM ALLEN PA /IND AC
3030 CORNWALLIS RD. 77 77 89
RESEARCH TRIANGLE PK 27709 919 248-4655
U OF MIAMI

PEDIATRICS

ALTSHULLER, LILLIS FLATMAN PD AC
1301 FAYETTEVILLE ST. 54 54 86
DURHAM 27707 919 683-1316
CASE WESTERN RES

ARENA, JAY MORRIS PD L
DUKE HOSPITAL, BOX 3024 32 32 39
DURHAM 27710 919 684-6138
DUKE

BAILEY, CLARENCE ALMON, JR. PD /AI AC
1824 HILLANDALE ROAD 58 63 64
DURHAM 27705 919 286-2202
U OF NC

BOAT, THOMAS FREDERICK PD /PUD AC
2025 S. LAKESHORE DRIVE 66 67 84
CHAPEL HILL 27514 919 966-4427
U OF IOWA

BROWNLEE, ROBERT CALVIN PD AC
111 SILVER CEDAR COURT 45 45 81
CHAPEL HILL 27514 919 929-0461
VANDERBILT U

CATO, ALLEN EASLEY, JR. PD /PUD AC
4364 S. ALSTON AVE. #201 69 69 77
DURHAM 27713 919 361-2286
DUKE

CHAMBERLIN, HARRIE ROGERS PD L/RT
1001 ARROWHEAD RD. 45 53 53
CHAPEL HILL 27514 919 942-4951
HARVARD

CLARK, DOUGLAS WINSTON PD AC
2609 N. DUKE ST., STE. 801 83 85 86
DURHAM 27704 919 477-3434
U OF NC

CLYDE, WALLACE ALEXANDER, JR. PD /ID AC
535 BURNETT-WOMACK BLDG. 54 55 63
UNC, CB #7220
CHAPEL HILL 27599 919 966-2331
VANDERBILT U

COLLIER, ALBERT MILFORD PD /ID AC
UNC 535 CLI. SCI. BLDG.CB 7220 63 63 72
CHAPEL HILL 27599 919 966-2331
U OF MIAMI

DE'AK, WILLIAM RALPH PD AC
6350 QUADRANGLE DR. 65 66 91
CHAPEL HILL 27514 919 490-8717
U OF SOU. CALIF.

DENNY, FLOYD WOLFE, JR. PD /ID AC
BOX 3, WING D, CB #7240 46 61 61
UNC SCHOOL OF MEDICINE
CHAPEL HILL 27599 919 962-1136
VANDERBILT U

DRAKE, AMELIA FISCHER PD AC
UNC, CB 7070 81 81 90
CHAPEL HILL 27599 919 966-3341
U OF NC

FERNALD, GERALD WALLACE PD /ID AC
509 BURNETT-WOMACK, CB 7220 60 60 68
UNC SCHOOL OF MEDICINE
CHAPEL HILL 27599 919 966-2069
U OF NC

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

FINDLAY, JEAN MARJORIE HEY PD AC
14 CLEARWATER DR. 70 75 79
DURHAM 27707 919 286-2202
ABERDEEN U

FREDRICKSON, DOREN DALE PD /PH R
UNC, BOX 7225 86 89 89
COMMUNITY PEDIATRICS
CHAPEL HILL 27599 919 966-2505
U OF KANSAS

FRIEDMAN, PATRICIA ANN PD AC
DEVELOPMENTAL EVAL. CTR. 83 86 90
3040 ERWIN RD.
DURHAM 27705 919 383-3332
U OF NC

GAGLIANO, MARTHA ELLEN PD AC
2609 N. DUKE ST., STE. 801 82 82 87
DURHAM 27704 919 477-3434
DUKE

GARFUNKEL, JOSEPH MORRIS PD AC
229 HUNTINGTON DR. 48 49 85
CHAPEL HILL 27514 919 966-5215
TEMPLE U

GUESS, HARRY ADELBERT PD /PH AC
104 WATERFORD PL. 79 80 79
CHAPEL HILL 27514 919 248-2793
U OF MIAMI

HERRINGTON, ROBERT THOMAS PD /PDC AC
N. C. MEMORIAL HOSPITAL 57 59 68
CHAPEL HILL 27599 919 966-4601
U OF WASHINGTON

HICKS, ANNA LAURIE PD AC
2116 WILSON ST. 86 89 90
DURHAM 27705 919 490-8706
MED COLL OF GA

KATZ, SAMUEL LAWRENCE PD /ID AC
BOX 2925, DUMC 52 54 69
DURHAM 27710 919 684-3734
HARVARD

KRAYBILL, ERNEST NISSLEY PD /NPM AC
CB #7220, UNC,DEPT. OF PED. 62 62 73
CHAPEL HILL 27599 919 966-5063
U OF PENN

LODA, FRANK A. PD /ID AC
CTR. FOR EARLY ADOLESCENCE 60 60 71
CARR MILL MALL, STE. 211
CARRBORO 27516 919 966-2504
VANDERBILT U

LONDON, WILLIAM LORD PD /PHO AC
2609 N. DUKE ST.,STE 801 55 55 61
DURHAM 27704 919 477-3434
U OF NC

MCINTOSH, OVETA B. PD AC
1811 EASTWOOD DR. 83 85 87
DURHAM 27713 919 683-1316
U OF NC

MOSES, JOHN W., JR. PD AC
1210 MANGUM ST. 83 86 87
DURHAM 27701 919 688-5463
MED U OF SC

MUMFORD, LARRY PD /NPM AC
3115 ACADEMY ROAD 67 68 79
DURHAM 27707 919 489-1976
U OF NC

NEAL, CHARLES BODINE, III PD AC
2919 COLONY ROAD 55 55 60
DURHAM 27705 919 489-9158
DUKE

NELSON, RICHARD ALLAN PD C
3817 WEST CREST 71 73 82
DURHAM 27707 919 493-2155
U OF NC

NOAH, TERRY LEE PD /PDP R
1803 PATHWAY DR. 85 87 88
CARRBORO 27510 919 966-1055
U OF MICHIGAN

OSTERHOUT, SHIRLEY K. PD AC
BOX 3007, DUMC 57 57 84
DURHAM 27710 919 684-4438
DUKE

RICE, A. DOUGLAS PD L/RT
706 E. CONSTITUTION DR. 51 54 55
DURHAM 27705 919 489-9158
DUKE

ROUSE, JAMES BRISTOL PD /N AC
2609 N. DUKE ST., STE.801 65 65 71
DURHAM 27704 919 220-6434
DUKE

SCHANBERG, LAURA EVE PD /RHU R
3402 BONAPARTE WAY 84 87 90
DURHAM 27707 919 684-4433
DUKE

SCHMIDT, EVELYN PD /PH AC
1301 FAYETTEVILLE STREET 51 51 71
DURHAM 27707 919 683-1316
DUKE

SHARP, MICHAEL CONAT PD AC
UNC, CB 7340 74 77 90
FAMILY SUPPORT NETWORK
CHAPEL HILL 27599 919 966-2841
HARVARD

SHULER, JIMMIE BLAKE PD C
1002 W. KNOX ST. 78 82 83
DURHAM 27701 919 683-4334
MEHARRY MED COLL

STOCKWELL, JANA A. PD /CC AC
605 MARSHALL WAY 86 00 89
DURHAM 27705 919 383-7745
U TX-SOU.WESTERN

STRATTON, IDA JANICE DEAS PD /PH AC
414 E. MAIN ST. 61 61 84
DURHAM 27701 919 560-7601
TULANE U

WEBB, BAILEY PD L/RT
2616 ERWIN RD., APT. D-2 46 49 49
DURHAM 27705 919 382-7458
DUKE

WILFERT, CATHERINE M. MINOCK PD /ID AC
BOX 2951, DUMC 62 62 85
DURHAM 27710 919 684-6610
HARVARD

WORLEY, GORDON, III PD AC
307 BIRCH CIRCLE 73 73 87
CHAPEL HILL 27514 919 683-6890
HARVARD

YANCY, WILLIAM SAMUEL PD /ADL AC
2609 N. DUKE ST., STE. 801 65 65 72
DURHAM 27704 919 477-3434
DUKE

PEDIATRIC ALLERGY

DEES, SUSAN COONS PDA /PD L/RT
BOX 2913, DUMC 34 34 41
DURHAM 27710 919 489-5263
JOHNS HOPKINS

SPOCK, ALEXANDER PDA /A
BOX 2994, DUMC 55 60 65
DURHAM 27710 919 681-3364
U OF MARYLAND

WHATLEY, JOSEPH WILLIAM, JR. PDA /A AC
2919 COLONY ROAD 59 59 63
DURHAM 27705 919 489-9158
DUKE

PEDIATRIC CARDIOLOGY

ANDERSON, PAGE ALBERT WILLIS PDC AC
BOX 3218, DUKE MEDICAL CTR. 64 65 80
DURHAM 27710 919 681-2916
DUKE

HARNED, HERBERT SPENCER, JR. PDC L/RT
803 SPRING DELL LANE 45 58 58
CHAPEL HILL 27514 919 966-4601
YALE

PEDIATRIC PULMONOLOGY

EDELL, DEAN SCOTT PDP R
210 KIRKWOOD DR. 87 00 90
CHAPEL HILL 27514 919 681-3364
AMER U CARIBBEAN

PEDIATRIC RADIOLOGY

GROSSMAN, HERMAN LEWIS PDR /PD AC
BOX 3834, DUMC 53 71 74
DURHAM 27710 919 681-2711
COLUMBIA U

PEDIATRIC SURGERY

AZIZKHAN, RICHARD GEORGE PDS /GS AC
UNC, DEPT. OF SURGERY CB 7210 76 77 90
CHAPEL HILL 27599 919 966-4643
PENN STATE U

PUBLIC HEALTH

ADER, OTTIS LADEAU PH L/RT
3812 FORRESTGATE DR. APT. 215 25 25 51
WINSTON-SALEM 27103 919 595-2251
U OF PENN

COLE, THOMAS BALLARD PH /PD AC
PO BOX 27687 81 81 90
RALEIGH 27611 919 733-3222
BAYLOR

DINAPOLI, RAPHAEL JOSEPH, JR. PH /AM AC
1985 UMSTEAD DR. 59 64 81
DIV. OF MEDICAL ASSISTANCE
RALEIGH 27603 919 733-2833
DOWNSTATE ME CTR

ROBERTS, MARIE PH L/RT
BOX #7 49 51 51
BAHAMA 27503 919 477-2378
MED U OF SC

PEDIATRIC HEMATOLOGY-ONCOLOGY

COOPER, HERBERT A. PHO /CLP AC
UNC, CB #7220 64 65 76
BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-1178
U OF KANSAS

FALLETTA, JOHN MATTHEW PHO AC
BOX 2916, DUMC 66 67 79
DURHAM 27710 919 684-3401
U OF KANSAS

MCMILLAN, CAMPBELL WHITE PHO /PD AC
UNC, DEPT. OF PED. CB #7220 52 52 61
CHAPEL HILL 27599 919 966-3133
BOWMAN GRAY

PLASTIC SURGERY

BARWICK, WILLIAM JAMES PS /GS AC
BOX 3098, DUMC 71 71 85
DURHAM 27710 919 684-3320
U OF TENNESSEE

BEVIN, ABNER GRISWOLD, JR PS /GS AC
UNC, DIV. OF PLASTIC SURG. 60 60 69
CB #7195
CHAPEL HILL 27599 919 966-4446
YALE

DAVIS, JEFFERSON U. PS AC
UNC, MEDICAL SCHOOL WING D 80 82 89
CB #7195
CHAPEL HILL 27599 919 966-4446
DUKE

GEORGIADE, GREGORY S. PS /GS AC
BOX 3960, DUMC 74 73 78
DURHAM 27710 919 684-3039
DUKE

GEORGIADE, NICHOLAS GEORGE PS L
BOX 3098, DUMC 50 51 54
DURHAM 27710 919 684-2854
DUKE

GUTTER, GUIDO PETER PS AC
3901 N. ROXBORO RD. 77 81 87
PO BOX 15249
DURHAM 27704 919 479-4100
U OF ZURICH

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

ANIER, VERNE CLIFTON, JR. PS /GS AC
300 CRUTCHFIELD ST. 66 66 78
DURHAM 27704 919 471-3406
VANDERBILT U

EACOCK, ERLE EWART, JR. PS /GS RT
109 CONNER DR., STE. 2204 49 53 56
CHAPEL HILL 27514 919 933-0005
HARVARD

ETERSON, HUGH DUANE PS /GS AC
UNC, BURNETT-WOMACK BLDG. 62 65 83
CHAPEL HILL 27599 919 966-3693
NORTHWESTERN U

IEFKOHL, RONALD PS /GS AC
300 CRUTCHFIELD ST. 72 72 81
DURHAM 27704 919 684-2854
TULANE U

IZZUTI, RICHARD PHILIP PS R
3301 LASSITER ST. 83 85 85
DURHAM 27707
EAST CAROLINA U

ERAFIN, DONALD PS /GS AC
DUMC-PLASTIC SURGERY 64 64 74
DURHAM 27710 919 684-3347
DUKE

TETS, JOAN MARIE PS /GS AC
2609 N. DUKE ST. #612 77 78 87
DURHAM 27704 919 471-3990
OHIO STATE U

HOMPSON, LAWRENCE KESLAR, III PS AC
2609 N. DUKE ST., STE. 401 61 61 70
DURHAM 27704 919 471-2502
DUKE

THOLOGY, ANATOMICAL AND CLINICAL

ERNHARDT, PETER F. PTH R
3549 MAYFAIR ST., APT. 101 86 86 86
DURHAM 27707 919 493-2132
DUKE

LOW, OSBERT PTH R
5238 N. WILLOWHAVEN DR. 87 88 87
DURHAM 27712 919 383-1076
DUKE

OSSEN, EDWARD HECHT PTH AC
BOX 3712, DUMC 65 66 85
DURHAM 27710 919 684-3300
DUKE

RINKHOUS, KENNETH MERLE PTH /HEM L
UNC, DEPT.OF PATH., 228-H 32 32 47
CHAPEL HILL 27599 919 966-1061
U OF IOWA

ALLDORF, FREDERIC GILBERT PTH /ATP AC
308 WOODHAVEN RD. 58 65 66
CHAPEL HILL 27514 919 966-4541
CORNELL U

ALY, JOHN T. PTH /FOP AC
P. O. BOX 15337 68 69 78
DURHAM 27704 919 477-6742
CORNELL U

RAFFIN, RICHARD MARION PTH AC
PO BOX 15643 75 77 83
DURHAM 27704 919 470-5251
DUKE

ETTER, BERNARD FRANK PTH /DMP L/RT
3836 SOMERSET DR. 44 44 53
DURHAM 27707
DUKE

ERATZ, JOACHIM DIETER PTH AC
UNC, DEPT. OF PTH CB #7525 53 59 60
CHAPEL HILL 27599 919 966-4294
J.W.GOETHE UNIV.

IOANNINI-BROWN, CAROL ANN PTH AC
5009 N. GLEN DRIVE 70 70 85
RALEIGH 27609 919 470-4000
ST LOUIS U

RAHAM, DOYLE GENE PTH /NA AC
BOX 3005, DUMC 66 66 89
DURHAM 27710 919 684-2498
DUKE

RAHAM, JOHN BORDEN PTH /HEM L/RT
UNC SCHOOL OF MEDICINE 42 42 47
CHAPEL HILL 27599 919 966-4318
CORNELL U

GRIM, KENNETH BOYD PTH /CLP L/RT
124 FIRST ST. NW 37 37 53
LONG BEACH 28461 919 278-9424
U OF VIRGINIA

GRISHAM, JOE WHEELER PTH /GE AC
UNC, DEPT.OF PTH-CB #7525 57 57 74
CHAPEL HILL 27599 919 966-4678
VANDERBILT U

GUNTER, JUNE U. PTH L/RT
1411 N. MANGUM STREET 36 36 47
DURHAM 27701 919 688-3457
JEFFERSON

HONKANEN, FRANK A. PTH /FOP R
BOX 3712, DUMC 86 87 88
DURHAM 27710 919 684-3300
MED COLL OF GA

HUFFINES, WILLIAM DAVIS PTH /GP AC
UNC, CB 7520 55 55 60
BERRYHILL HALL
CHAPEL HILL 27599 919 966-1134
U OF NC

JENNINGS, ROBERT BURGESS PTH /CLP AC
BOX 3712, DUMC 50 50 76
DURHAM 27710 919 684-3528
NORTHWESTERN U

JOHNSTON, WILLIAM WEBB PTH AC
BOX 3712, DUMC 59 59 71
DURHAM 27710 919 684-3587
DUKE

LANGDELL, ROBERT DANA PTH /BLB L/RT
UNC SCHOOL OF MEDICINE,228-H 48 51 53
CHAPEL HILL 27599 919 966-4333
GEO WASHINGTON U

ODERE, FRED GORDON PTH AC
DURHAM CO. HOSP-PTH 70 74 79
DURHAM 27704 919 470-5243
GEO WASHINGTON U

PROIA, ALAN DAVID PTH AC
4118 DEEPWOOD CIRCLE 80 80 81
DURHAM 27707 919 489-3161
CORNELL U

SANFILIPPO, ALFRED PAUL PTH /IG AC
3315 STONEYBROOK DRIVE 76 76 74
DURHAM 27705 919 684-2482
DUKE

SHELBURNE, JOHN DANIEL PTH AC
BOX 3712, DUMC 72 72 78
DURHAM 27710 919 286-6925
DUKE

SHERMER, RICHARD WAYNE PTH AC
UNC, DEPT. OF PTH-CB #7525 63 63 73
BRINKHOUS-BULLITT BLDG.228H
CHAPEL HILL 27599 919 966-2339
U OF NC

VANDERSTEENHOVEN, ANN MARIE PTH R
4412 SUNNY COURT 87 87 90
DURHAM 27705 919 684-3300
MED U OF SC

VICK, WILLIAM WOODROW PTH R
1212 TALLYHO TRAIL 87 87 84
CHAPEL HILL 27516 919 684-3300
DUKE

WASHINGTON, MARY KAY PTH R
503 E. TRINITY AVE. 86 90 84
DURHAM 27701 919 684-3300
U OF NC

PULMONARY DISEASES

DONOHUE, JAMES FRANCIS PUD /IM AC
UNC, 724 BURNETT-WOMACK 69 69 84
CHAPEL HILL 27599 919 966-2531
MED SCH-UMDNJ

FRIEDMAN, MITCHELL PUD /IM AC
DIV. OF PULMONARY DISEASES 69 69 77
UNC, DEPT. OF MEDICINE
CHAPEL HILL 27599 919 966-2532
U OF MIAMI

GEARY, LEON WALLACE PUD /A AC
2609 N. DUKE ST., STE. 504 75 75 82
DURHAM 27704 919 471-4466
TEXAS TECH U

KYLSTRA, JOHANNES ARNOLD PUD /A AC
4415 MALVERN RD. 52 66 79
DURHAM 27707 919 493-1574
U OF LEIDEN

SALTZMAN, HERBERT AARON PUD /A AC
BOX 3838, DUMC 52 53 58
DURHAM 27710 919 684-4149
JEFFERSON

VANDIVIERE, H. MAC PUD /PD AC
U. OF KENTUCKY, PED. MN 102 60 60 61
LEXINGTON, KY 40536 606 233-5857
U OF NC

PSYCHOANALYSIS

BRAASCH, LESLEY KRIEGMAN PYA /P AC
4114 DEEPWOOD CIRCLE 70 73 76
DURHAM 27707 919 493-2217
DOWNSTATE ME CTR

FOWLER, JOHN ALVIS PYA /CHP L/RT
2721 SPENCER ST. 46 46 54
DURHAM 27705 919 489-5339
BOWMAN GRAY

FREEMAN, DAVID FRANKLIN PYA /CHP AC
ASHE PLACE 51 61 61
CHAPEL HILL 27514 919 942-4867
BOWMAN GRAY

GUAJARDO, CESAR PYA /P AC
20 W. COLONY PL., STE. 160 61 68 78
DURHAM 27705 919 489-2878
U DE NUEVO LEON

TUCKER, LANDRUM SYLVANIUS, JR. PYA/CHP AC
FRANKLIN SQUARE, BLDG 900-A 66 66 74
CHAPEL HILL 27514 919 942-8716
STANFORD U

RADIOLOGY

BROTHERS, MICHAEL FRANCIS R AC
BOX 3808, DUMC 80 81 90
DURHAM 27710 919 681-2711
DALHOUSIE U

CARROLL, BARBARA ANNE R AC
4718 HARMONY CHURCH RD. 72 73 85
EFLAND 27243 919 684-2711
STANFORD U

FOSTER, WILLIAM LEICESTER, JR. R AC
DUMC, DEPT. OF RADIOLOGY 74 74 80
DURHAM 27710 919 286-0411
DUKE

JONES, MORRIS ALEXANDER, JR. R AC
3643 N. ROXBORO ST. 59 59 65
DURHAM 27704 919 471-3411
U OF NC

MARTINEZ, SALUTARIO R AC
DUMC, DEPT. OF RADIOLOGY 60 71 76
DURHAM 27710 919 684-2711
U OF HAVANA

MAXWELL, JOHN KEVIN R R
102-J COOPER ST. 85 86 89
CHAPEL HILL 27514 919 966-1461
U OF UTAH

NEWMAN, GLENN EDWIN R /DR AC
BOX 3808, DUMC 73 00 90
DURHAM 27710 919 681-2711
DUKE

PADDISON, GEORGE MARION R AC
3920 REGENT ROAD 66 66 73
DURHAM 27707 919 489-0272
U OF NC

PUTMAN, CHARLES EDGAR R /IM AC
DU, 203 ALLEN BLDG. 67 67 78
DURHAM 27706 919 684-3403
U OF TEXAS

RAVIN, CARL ERIC R AC
BOX 3808, DUMC 68 71 79
DURHAM 27710 919 681-2711
CORNELL U

SATHER, RANDALL KENNETH R AC
3101 PETTY RD., STE. 1401 69 69 83
DURHAM 27707 919 383-9407
MED COLL OF GA

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

SCATLIFF, JAMES HOWARD R AC
NC MEMORIAL HOSP., CB 7510 52 66 67
DEPT. OF RADIOLOGY
CHAPEL HILL 27599 919 966-4238
NORTHWESTERN U

SCHLASEMAN, GUY W. R L/RT
3437 RUGBY RD. 46 54 54
DURHAM 27707
DUKE

SULLIVAN, DANIEL CARL R /P AC
BOX 3808, DUMC 70 70 86
DURHAM 27710 919 684-2711
U OF VERMONT

VOORHEES, DIANA R. R AC
2609 N. DUKE ST., STE. 303 81 81 90
DURHAM 27704 919 471-8411
PENN STATE U

WERTMAN, DANIEL EDWARD, JR. R AC
DURHAM GEN. HOSP-RAD. 76 77 84
DURHAM 27704 919 471-3411
OHIO STATE U

RHEUMATOLOGY

BARADA, FRANC A., JR. RHU /IM AC
2609 N. DUKE ST. 71 71 82
DURHAM 27704 919 477-5179
U OF VIRGINIA

CALDWELL, DAVID STEWART RHU /IM AC
BOX 2978, DUMC 71 71 77
DURHAM 27710 919 684-8844
BOWMAN GRAY

HADLER, NORTIN MARVIN RHU /IM AC
UNC, DEPT. OF MEDICINE 68 69 75
CHAPEL HILL 27599 919 966-4191
HARVARD

RICE, JOHN RUSSELL RHU AC
BOX 3383, DUMC 68 69 78
DURHAM 27710 919 684-3313
U OF MIAMI

SAUTER, SUZANNE VAN HOUTEN RHU /IM AC
UNC, TRAILER 33, CB #7200 74 74 80
CHAPEL HILL 27599 919 966-5164
U OF NC

TOOHEY, ANNE KATHLEEN RHU /IM AC
4205 BEN FRANKLIN BLVD. 77 80 89
PO BOX 16999
DURHAM 27704 919 477-6900
U OF NEBRASKA

WINFIELD, JOHN BUCKNER RHU /IM AC
UNC DEPT. OF MED. 68 69 79
932 FLOB, CB 7280
CHAPEL HILL 27599 919 966-4191
CORNELL U

YOUNT, WILLIAM JAY RHU /AI AC
UNC, 932 FLOB BLDG. CB 7280 60 60 70
CHAPEL HILL 27599 919 966-4191
U OF WISCONSIN

RADIATION ONCOLOGY

EDKINS, PATRICIA TEAGUE RO AC
UNC HOSPITALS 80 81 78
DEPT. OF RADIATION ONCOLOGY
CHAPEL HILL 27599 919 966-1101
U OF NC

SAILER, SCOTT L. RO AC
NCMH, DEPT. OF RADIATION ONC. 84 88 89
CHAPEL HILL 27599 919 966-7700
HARVARD

TEPPER, JOEL RO AC
UNC SCHOOL OF MED. 72 73 88
RADIATION ONCOLOGY, CB 7512
CHAPEL HILL 27599 919 966-7700
WASHINGTON U

THERAPEUTIC RADIOLOGY

ANSCHER, MITCHELL S. TR /IM AC
BOX 3085, DUMC 81 82 87
DURHAM 27710 919 684-3742
MED COLL OF VA

BRIZEL, DAVID MANFIELD TR AC
BOX 3085, DUMC 83 83 89
DURHAM 27710 919 684-3742
NORTHWESTERN U

HALPERIN, EDWARD CHARLES TR AC
BOX 3085, DUMC 79 80 84
DURHAM 27710 919 684-3196
YALE

MONTANA, GUSTAVO SANTOS TR AC
DUMC-RADIATION ONC. 60 60 71
DURHAM 27710 919 684-6183
NATL U COLOMBIA

OLESON, JAMES ROBERT TR /ON AC
BOX 3085, DUMC 76 76 85
DURHAM 27710 919 684-3742
U. OF ARIZONA

PROSNITZ, LEONARD R. TR AC
BOX 3085, DUMC 61 65 84
DURHAM 27710 919 684-3805
DOWNSTATE ME CTR

VARIA, MAHESH AMRATLAL TR AC
RADIATION ONCOLOGY-UNC 67 73 77
CB #7512
CHAPEL HILL 27599 919 966-7700
U OF LIVERPOOL

THORACIC SURGERY

EGAN, THOMAS MICHAEL TS /GS AC
UNC, CB 7065 76 77 90
BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-3381
U OF TORONTO

GLOWER, DONALD D., JR. TS AC
BOX 31064, DUMC 80 89 89
DURHAM 27710 919 681-5789
JOHNS HOPKINS

KEAGY, BLAIR ALLEN TS /CDS AC
UNC, CB 7065 70 70 83
108 BURNETT-WOMACK BLDG.
CHAPEL HILL 27599 919 966-3381
U OF PITTSBURGH

MCCUTCHEON, WILLIAM B.,JR. TS /CDS RT
3901 ROXBORO RD. 52 55 58
DURHAM 27704 919 383-5531
MED COLL OF VA

MILL, MICHAEL ROBERT TS /GS AC
UNC, CB 7065 80 81 90
DIV. OF CARDIOTHORACIC SURGERY
CHAPEL HILL 27599 919 966-3381
U OF COLORADO

SEALY, WILL CAMP TS /CDS L
777 HEMLOCK ST., BOX 6000 36 36 48
MACON, GA 31208 912 744-1000
EMORY U

STAREK, PETER JOSEF KARL TS /GS AC
UNC, CB 7065, BURNETT-WOMACK 64 64 71
DIV. OF CARDIO-SURGERY
CHAPEL HILL 27599 919 966-3381
OHIO STATE U

YOUNG, WILLIAM GLENN, JR. TS /CDS AC
DUKE UNIV. MED. CTR. 48 50 57
DURHAM 27710 919 684-2037
DUKE

UROLOGICAL SURGERY

ANDERSON, EDWARD EVERETT U AC
DUKE UNIVERSITY MEDICAL CTR. 58 59 65
DURHAM 27710 919 684-3448
DUKE

ANDREWS, ROBERT WILLIAM U AC
923 BROAD ST. 80 85 85
DURHAM 27705 919 286-1297
BOWMAN GRAY

BERGANT, JAMES ALLEN U AC
2609 N. DUKE ST., SUITE 302 69 70 76
DURHAM 27704 919 471-8423
U OF KANSAS

BUNCE, PAUL LESLIE U L/RT
970 FAIRFIELD DR. 42 52 52
CHAPEL HILL 27514 919 933-8766
U OF CHICAGO

CARSON, CULLEY CLYDE, III U AC
BOX 3274, DUMC 71 72 7
DURHAM 27710 919 684-212
GEO WASHINGTON U

COPPRIDGE, ALTON JAMES U L/R
3605 RUGBY RD. 53 53 5
DURHAM 27707 919 286-129
U OF VIRGINIA

DEES, JOHN ESSARY U L/R
DUKE HOSPITAL 33 33 4
DURHAM 27710 919 684-692
U OF VIRGINIA

DONALDSON, JONATHAN T. U R
4310 BEECHNUT LN. 86 00 8
DURHAM 27707 919 684-811
BOSTON U

FRIED, FLOYD ALAN U AC
UNC, DEPT. OF SURGERY 61 61 7
CHAPEL HILL 27599 919 966-257
U OF CHICAGO

GRIMES, JOHN HARLIN U AC
2609 N. DUKE ST., STE. 302 65 65 7
DURHAM 27704 919 471-842
NORTHWESTERN U

HUGHES, JACK U L/R
30 KIMBERLY DR. 43 43 5
DURHAM 27707 919 489-950
U OF PENN

JOYNER, RAYMOND EDWARD U AC
923 BROAD STREET 68 68 7
DURHAM 27705 919 286-129
BOWMAN GRAY

KING, LOWELL RESTELL U /PD AC
BOX 3831, DUMC 56 56 8
DURHAM 27710 919 684-699
JOHNS HOPKINS

MESROBIAN, HRAIR-GEORGE U AC
428 BURNETT-WOMACK,229H 78 80 8
UNC, SCH. OF MED. CB #7235
CHAPEL HILL 27599 919 966-668
AMER.U OF BEIRUT

PAULSON, DAVID FREEMAN U AC
BOX 2977, DUMC 64 64 7
DURHAM 27710 919 684-505
DUKE

ROBERTS, LOUIS CARROLL U L/RT
3950 PLYMOUTH ROAD 33 35 4
DURHAM 27707 919 489-421
DUKE

SARMINA, IGNACIO U AC
923 BROAD ST. 82 83 8
DURHAM 27705 919 286-129
MED COLL OF OHIO

SEMANS, JAMES HUSTEAD U L
DUKE UNIV. MED. CTR. 36 53 5
DURHAM 27710 919 684-274
JOHNS HOPKINS

SHABAN, STEPHEN FRANCIS U AC
109 CONNER DR. STE. 2104 82 86 8
CHAPEL HILL 27514 919 968-465
MT SINAI SCH MED

TUCKER, M. SUSAN U AC
UNC, 428 BURNETT-WOMACK 77 80 8
CB #7235
CHAPEL HILL 27599 919 966-174
U TX-SAN ANTONIO

WALTHER, PHILIP JOHN U AC
BOX 3314, DUMC 75 77 8
DURHAM 27710 919 684-523
DUKE

WEBSTER, GEORGE DAVID U AC
DUMC, DIV. OF UROLOGY 68 77 7
DURHAM 27710 919 684-251
U OF BIRMINGHAM

WEINERTH, JOHN LOUIS U /GS AC
DUKE, DEPT. OF SURGERY 67 71 7
DURHAM 27710 919 684-415
HARVARD

WHITEHURST, ARTHUR W. U AC
2609 N. DUKE ST., STE. 102 68 68 9
DURHAM 27704 919 471-842
U OF VIRGINIA

32. DURHAM-ORANGE COMPONENT SOCIETY (Continued)

/HITESIDES, EDWARD WM. U R
1108 WILLOW DR. 88 00 88
CHAPEL HILL 27514 919 967-7440
U OF NC

WIENER, JOHN SAMUEL U R
2413 DELLWOOD DR. 88 88 88
DURHAM 27705 919 684-8111
TULANE U

VASCULAR SURGERY

MCCANN, RICHARD LUCAS VS /GS AC
BOX 2990, DUMC 74 83 84
DURHAM 27710 919 684-2620
CORNELL U

33. EDGECOMBE COMPONENT SOCIETY

)FFICERS—**President:** Kenneth M. Lovette, M.D., 101 Clinic Dr., Tarboro 27886 (919 823-2105)

IESTHESIOLOGY

ALLIN, ROBERT HANS ARTHUR AN AC
HERITAGE HOSPITAL 65 74 90
111 HOSPITAL DR.
TARBORO 27886 919 641-7700
KAROLINSKA INST

MERGENCY MEDICINE

ONRAD, LARRY LEE EM C
PO BOX 7178 64 64 86
TARBORO 27886
INDIANA U

AMILY PRACTICE

REW, JOHN EDWIN FP AC
P. O. BOX 337 60 60 61
MACCLESFIELD 27852 919 827-5231
BOWMAN GRAY

IUSSEY, HOWARD SUMMERELL, JR. FP L/RT
908 ST. ANDREW STREET 42 42 43
TARBORO 27886 919 823-2534
JEFFERSON

ETERS, ROBERT BROOKES, IV FP AC
101 CLINIC DRIVE 80 81 84
TARBORO 27886 919 823-2105
U OF NC

EMPLE, PETER LIVERMORE FP AC
101 CLINIC DRIVE 63 68 68
TARBORO 27886 919 823-2105
EMORY U

ICK, HENRY VERNELL FP AC
101 CLINIC DRIVE 55 55 59
TARBORO 27886 919 823-2105
BOWMAN GRAY

WINSLOW, JAMES WEEKS FP AC
101 CLINIC DRIVE 75 75 79
TARBORO 27886 919 823-2105
U OF NC

ENERAL PRACTICE

QUIGLESS, MILTON DOUGLAS, SR. GP /D AC
P. O. BOX 368 34 34 80
TARBORO 27886 919 823-2112
MEHARRY MED COLL

GENERAL SURGERY

KELSH, JAMES MICHAEL GS AC
101 CLINIC DRIVE 58 58 69
TARBORO 27886 919 823-2105
U OF MARYLAND

MORGAN, JOHN GARLAND GS /VS AC
101 CLINIC DR. 62 62 75
TARBORO 27886 919 823-2105
DUKE

INTERNAL MEDICINE

BROOKS, JOHN IRVING, JR. IM AC
TARBORO CLINIC 58 58 64
101 CLINIC DR.
TARBORO 27886 919 823-4212
U OF NC

CUTCHIN, LAWRENCE MCGILBRA IM /PD AC
RT. #3, BOX 325 62 62 69
TARBORO 27886 919 823-2105
U OF NC

HEMINGWAY, GEORGE CAPERS,JR. IM /PD AC
101 CLINIC DRIVE 63 63 70
TARBORO 27886 919 823-2105
U OF NC

NEWTON, DALE ALAN IM /PD AC
101 CLINIC DRIVE 73 74 75
TARBORO 27886 919 823-2105
U OF NC

OBSTETRICS AND GYNECOLOGY

LEE, DAVID WAYNE OBG AC
101 CLINIC DR. 82 82 79
TARBORO 27886 919 823-6221
U OF NC

LOVETTE, KENNETH MAURICE OBG AC
TARBORO CLINIC 79 80 83
TARBORO 27886 919 343-0161
U OF NC

OPHTHALMOLOGY

BARBE, ROBERT FRANCIS OPH H
PO BOX 1029 53 53 72
BUIES CREEK 27506 919 823-2105
MED COLL OF VA

CRAWFORD, ROBERT ORR, JR. OPH AC
101 CLINIC DR. 54 54 58
TARBORO 27886 919 823-8295
BOWMAN GRAY

ORTHOPEDIC SURGERY

MILLER, DAVID CHARLES ORS AC
123 HOSPITAL DR. 80 80 86
TARBORO 27886 919 823-7212
HAHNEMANN

PSYCHIATRY

THOMPSON, KENNETH COCHRAN P AC
106 NASH MEDICAL ARTS MALL 61 61 71
ROCKY MOUNT 27801 919 443-8002
U OF CINCINNATI

RADIOLOGY

YENNEY, MATTHEW FRED JOHN, JR. R /NM
111 HOSPITAL DR. 54 54 61
HERITAGE HOSPITAL
TARBORO 27886 919 641-7799
JEFFERSON

UROLOGICAL SURGERY

ZELNERONOK, NICHOLAI U C
101 CLINIC DR. 69 70 90
TARBORO 27886
U OF CALIFORNIA

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY

OFFICERS—**President:** William J. Spencer, M.D., 3310 Brookview Hills Blvd., #106, Winston-Salem 27103 (919 765-6020)
Secretary: Thomas J. Koontz, M.D., 2915 Lyndhurst Ave., Winston-Salem 27103 (919 765-5221)
Executive Director: James T. Robinson, 2990 Bethesda Place, Ste. 601-C, Winston-Salem 27103 (919 760-1234/1235)

O SPECIALTY LISTED

AHMAD, ZIA MOIZUDDIN R
2930-A WALNUT FOREST CT. 82 90 90
WINSTON-SALEM 27103 919 748-2605
DOW MED COLLEGE

ALLEN, CHARLES UPTON S
2329 ROSEWOOD AVE. 94 90
WINSTON-SALEM 27103 919 750-0260
BOWMAN GRAY

ANDERSON, J. ROBERT S
2000-J FALCON WOOD COURT 91 88
WINSTON-SALEM 27127 919 785-2667
BOWMAN GRAY

ANDERSON, SUSAN MCLENDON S
2000-J FALCON WOOD CT. 91 87
WINSTON-SALEM 27127 919 785-2667
BOWMAN GRAY

ANYADIKE, CYRIL S
1641-M NORTHWEST BLVD. 94 90
WINSTON-SALEM 27103 919 723-5205
BOWMAN GRAY

APPLEGATE, ROBERT J. AC
320 STANAFORD RD. 80 00 00
WINSTON-SALEM 27104
U OF VIRGINIA

ATTEBERRY, LINDA ROSE S
300 S. HAWTHORNE RD. BOX 185 91 87
WINSTON-SALEM 27103 919 723-5736
BOWMAN GRAY

BARNES, JAMES A., JR. R
126-2 LEWISVILLE-CLEMMONS RD. 87 87 89
CLEMMONS 27012 919 766-0762
MARSHALL U

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

BLAINE, DAVID ALLAN S
715 S. HAWTHORNE RD. 91 88
WINSTON-SALEM 27103 919 722-8519
BOWMAN GRAY

BRINKLEY, WILLIAM MCCALL, JR. S
826 BRENT ST. 93 90
WINSTON-SALEM 27103 919 724-2845
BOWMAN GRAY

BROCK, MARGARET FUNCH S
1105 WETHERBURN CT. 94 90
WINSTON-SALEM 27104 919 768-2750
BOWMAN GRAY

BROUETTE, THOMAS EDWARD S
2116 QUEEN ST. 94 90
WINSTON-SALEM 27103 919 721-9151
BOWMAN GRAY

BUCK, THERESA ANN S
671 CROSTON DR. 92 88
WINSTON-SALEM 27104 919 760-9636
BOWMAN GRAY

CARLSTEIN, MARJORIE L. S
413 YATES CT. #B 91 86
CHAPEL HILL 27516 919 725-8909
BOWMAN GRAY

CARLTON, JANIS H. S
PO BOX 5782 93 90
WINSTON-SALEM 27113
BOWMAN GRAY

CARTER, LAWRENCE S., JR. S
300 S. HAWTHORNE RD.,BOX 2602 93 89
WINSTON-SALEM 27103 919 727-1422
BOWMAN GRAY

CHANDLER, GINA GAIL S
1620 W. FIRST ST., #27 94 90
WINSTON-SALEM 27104 919 724-4649
BOWMAN GRAY

CHASE, TIMOTHY LEE S
2126 QUEEN ST., APT. #3 91 88
WINSTON-SALEM 27103 919 722-0064
BOWMAN GRAY

CHIU, ARVA YAHUA S
1625 NORTHWEST BLVD. 91 87
WINSTON-SALEM 27104 919 777-8680
BOWMAN GRAY

CLAPP, CHRISTOPHER RANDOLPH S
1919 ACADEMY ST., APT. 19 94 90
WINSTON-SALEM 27103 919 750-0801
BOWMAN GRAY

CLARK, MICHAEL EMIL S
1227 EBERT ST. 91 87
WINSTON-SALEM 27103 919 942-1975
BOWMAN GRAY

COLLINS, DONALD MICHAEL S
4755 COUNTRY CLUB RD. 94 90
APT. 110-G
WINSTON-SALEM 27104 919 659-8997
BOWMAN GRAY

CONNOLLY, INGEBORG VICTORIA S
532 POLO ROAD 94 90
WINSTON-SALEM 27106 919 759-3439
BOWMAN GRAY

COPE, BRIAN SCOTT S
506 TRENT CT. 91 87
CLOISTER OAKS
WINSTON-SALEM 27127 919 650-1709
BOWMAN GRAY

CREEDON, TARA AILEEN S
5856 OLD OAKRIDGE RD. APT. 414 94 90
GREENSBORO 27410 919 668-9486
BOWMAN GRAY

CROMPTON, JOHN DAVID R
300 S. HAWTHORNE RD. 86 87 88
WINSTON-SALEM 27103 919 748-2011
U OF NC

DAVIS, JOHN PERRY, JR. R
447 LAWNDALE DR. 88 89 90
WINSTON-SALEM 27104 919 748-2011
MED U OF SC

DEAN, JOAN C. B. AC
1227 MARTIN ST. 82 87 88
WINSTON-SALEM 27103 919 659-8202
CETEC

DEBOT, HEIDI MARIA S
1527 NORTHWEST BLVD. 92 88
WINSTON-SALEM 27103 919 724-1673
BOWMAN GRAY

DICKERSON, STEVEN REID S
2307 QUEEN ST. #D 92 88
WINSTON-SALEM 27103 919 777-1491
BOWMAN GRAY

DUGGINS, STEPHANIE MURPHY S
1608-M NORTHWEST BLVD. 93-91
WINSTON-SALEM 27104 919 724-7480
BOWMAN GRAY

ELLINGTON, JOE C., JR. S
816 GALES AVE. 91 88
WINSTON-SALEM 27103 919 724-7691
BOWMAN GRAY

ELY, EUGENE WESLEY, JR. R
1016 VERNON AVE. 89 00 89
WINSTON-SALEM 27106 919 748-4490
TULANE U

ELY, KIM ADAMS R
1016 VERNON AVE. 89 89 90
WINSTON-SALEM 27106 919 761-0331
TULANE U

FERNANDEZ, MARC EVAN R
1516 ACADEMY ST. 89 90 90
WINSTON-SALEM 27103 919 748-2011
U OF SOU FLORIDA

FORAUER, ANDREW R. S
2230 SUNDERLAND RD. #35E 91 87
WINSTON-SALEM 27103 919 765-2970
BOWMAN GRAY

FORBES, JOSEPH DAVIDSON R
431-L PARK RIDGE LN. 90 00 90
WINSTON-SALEM 27104
U OF TENNESSEE

FOSTER, MARSHALL SHANE S
2006 SHERWOOD DR. 94 90
WINSTON-SALEM 27103 919 725-2725
BOWMAN GRAY

GIBSON, SUSAN H. S
4755 COUNTRY CLUB RD. #121-I 91 00
WINSTON-SALEM 27104 919 760-4416
BOWMAN GRAY

GRICE, KATHRYN A. R
3932 HAMPTON RD. 85 86 89
CLEMMONS 27012 919 748-4498
BOWMAN GRAY

GUZMAN, ROSA NIVEA R
300 S. HAWTHORNE RD. 87 91
WINSTON-SALEM 27103 919 748-4218
U OF SOU FLA

HALL, CHRISTOPHER STERLING S
1706 LYNWOOD AVE. 94 90
WINSTON-SALEM 27104 919 727-7534
BOWMAN GRAY

HENDERSON, DAVID ANTHONY S
1701 W. FIRST ST. #1 94 90
WINSTON-SALEM 27104 919 724-7760
BOWMAN GRAY

HERRMAN, KIMBERLY COLLINS S
2841-C TULLEY SQUARE 94 90
WINSTON-SALEM 27106 919 722-4069
BOWMAN GRAY

HIGHTOWER-HUGHES, BERNADETTE M S
360 GLENDARE DR. #G 94 90
WINSTON-SALEM 27104 919 765-5133
BOWMAN GRAY

HONORE, GERARD M. S
300 S. HAWTHORNE RD. BOX 2672 92 88
WINSTON-SALEM 27103 919 727-0522
BOWMAN GRAY

HORWITZ, JAMES LAWRENCE R
800 BRENT ST. 88 89 90
WINSTON-SALEM 27103 919 748-3254
WAYNE STATE U

HUDSPETH, DUDLEY ALLEN R
834 CAROLINA AVE. 87 88 88
WINSTON-SALEM 27101 919 748-2011
U OF NC

HUGHES, DOREEN L. R
664 N. SPRING ST. #4 90 00 86
WINSTON-SALEM 27101 919 748-2011
BOWMAN GRAY

HULL, JANE RENEE S
2369-A QUEEN ST. 93 9
WINSTON-SALEM 27103 919 724-926
BOWMAN GRAY

HUNTER, DAVID MONTGOMERY (
1828 ELIZABETH AVE. 87 00 8
WINSTON-SALEM 27103 919 748-499
BOWMAN GRAY

HWANG, LORIS Y. S
235 CORONA ST., APT. 204 94 9
WINSTON-SALEM 27103 919 722-530
BOWMAN GRAY

JOBE, DANIEL BRIAN S
3010-T WALNUT FOREST CT. 93 9
WINSTON-SALEM 27103 919 659-923
BOWMAN GRAY

JORDAN, PETER MANNING F
2252 ELIZABETH AVE. 85 86 8
WINSTON-SALEM 27103 919 748-201
U OF NC

KASPAR, JOHN V. S
1337 TREDWELL DR. 91 8
WINSTON-SALEM 27103 919 725-778
BOWMAN GRAY

KELLAM, LORI GOCO S
794 SCOTT ROAD 91 9
LEWISVILLE 27023 919 945-385
BOWMAN GRAY

KIRKLAND, JOHN A., JR. (
1416 JEREMY LANE 85 86 8
ROCKY MOUNT 27803 919 748-413
U OF NC

KOUFMAN, JAMES ALAN /OTO AC
BOWMAN GRAY, DIV. OTO 73 75 7
WINSTON-SALEM 27103 919 748-416
BOSTON U

KUROWSKI, KARIN I. S
5208 CAROLWOOD DR. 91 8
GREENSBORO 27407 919 292-466
BOWMAN GRAY

LATZ, JOHN E., JR. S
1322 MADISON AVE. 91 8
WINSTON-SALEM 27103 919 723-530
BOWMAN GRAY

LESSER, GLENN JAY F
300 S. HAWTHORNE RD. 87 88 8
WINSTON-SALEM 27103 919 748-201
PENN STATE U

LIEBERMAN, SCOTT ALAN S
2400 WESTOVER DR. 93 9
WINSTON-SALEM 27103 919 750-095
BOWMAN GRAY

MACMURDO, SCOTT ANDERSON S
2035 W. ACADEMY ST. 94 9
WINSTON-SALEM 27103 919 584-879
BOWMAN GRAY

MARLOWE, DONNA M. S
805 W. END BLVD. APT. B-4 91 8
WINSTON-SALEM 27101 919 727-186
BOWMAN GRAY

MARR, ALBERT WOODALL S
1101 W. FOURTH ST. 93 9
WINSTON-SALEM 27101 919 721-166
BOWMAN GRAY

MARTIN, ERIC MEYER S
2371-D FORSYTH CT. 94 9
WINSTON-SALEM 27103 919 724-641
BOWMAN GRAY

MATHEWS, RAYMOND M., JR. S
2743 LONDON LANE 92 8
WINSTON-SALEM 27103 919 765-080
BOWMAN GRAY

MCGEE, ROBERT SAUNDERS, JR. S
6308 LAKEBEND COURT 94 9
GREENSBORO 27410 919 665-199
BOWMAN GRAY

MCKINNEY, MARTHA L. S
1608 W. NORTHWEST BLVD. #O 92 8
WINSTON-SALEM 27104 919 723-478
BOWMAN GRAY

MCLANE, JAMES W. S
1615 NORTHWEST BLVD. 92 8
WINSTON-SALEM 27104 919 761-179
BOWMAN GRAY

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

YER, DAVID DAVIS AC
800 S. HAWTHORNE ROAD 69 69 85
WINSTON-SALEM 27103 919 768-1860
BOWMAN GRAY

LLER, PAUL KING S
111 DALEWOOD DR. #2 91 90
WINSTON-SALEM 27104
BOWMAN GRAY

URRAY, PAUL MICHAEL R
1051 S. HAWTHORNE RD. 85 86 89
WINSTON-SALEM 27103 919 748-2011
U OF FLORIDA

AL, SARA LYNN S
1318 MADISON AVE. 94 90
WINSTON-SALEM 27103
BOWMAN GRAY

UFELD, JACOB ALAN S
300 S. HAWTHORNE RD., BOX 141 92 89
WINSTON-SALEM 27103 919 761-8205
BOWMAN GRAY

USSEAR, DAVID WILLIAM S
1617 QUEEN ST. 92 89
WINSTON-SALEM 27103 919 723-3930
BOWMAN GRAY

BRIEN, MICHAEL K. S
2418 LYNDHURST AVE. 91 87
WINSTON-SALEM 27103 919 723-1492
BOWMAN GRAY

ASSERO, NICHOLAS JOHN R
181 DALEWOOD DR., APT. #9 89 90 90
WINSTON-SALEM 27104 919 768-0477
MARSHALL U

ATTERSON, PATRICIA ENLOE S
1632 W. FIRST ST., APT. #1 93 90
WINSTON-SALEM 27103 919 721-0903
BOWMAN GRAY

ENNY, MICHAEL G. S
270 MEADOWLARK RD. 93 90
WINSTON-SALEM 27106 919 945-4175
BOWMAN GRAY

ERRY, EVERETT LAVERN S
2502 BOONE AVENUE 94 91
WINSTON-SALEM 27103 919 750-0919
BOWMAN GRAY

ESANO, RICK LOUIS S
1407-A SENECA ST. 91 88
WINSTON-SALEM 27103 919 748-0946
BOWMAN GRAY

OLLOCK, DAVID CARL S
2053 ELIZABETH AVE. 92 90
WINSTON-SALEM 27103 919 724-9453
BOWMAN GRAY

RUETT, STEVEN WARD S
2431 LYNDHURST AVE. 93 90
WINSTON-SALEM 27103 919 721-0614
BOWMAN GRAY

APPAPORT, TODD S
1608-C NORTHWEST BLVD. 94 90
WINSTON-SALEM 27104
BOWMAN GRAY

EECE, NEIL SCOTT S
2339-C SALEM COURT 94 90
WINSTON-SALEM 27103 919 722-1467
BOWMAN GRAY

ENOUARD, ROBERT SPENCER S
1640 NORTHWEST BLVD., STE. 4 94-91
WINSTON-SALEM 27104 919 761-1929
BOWMAN GRAY

ICE, WILLIAM YATES, III R
706 FRIAR TUCK ROAD 89 00 90
WINSTON-SALEM 27104 919 748-2011
BOWMAN GRAY

OGERS, MICHAEL SEAN S
1608-L NORTHWEST BLVD. 94 90
WINSTON-SALEM 27104 919 777-0334
BOWMAN GRAY

EARS, RICHARD JOHN S
3556 HEATHROW DR. 91 87
WINSTON-SALEM 27127 919 785-4520
BOWMAN GRAY

EARS, VICTOR W., JR. R
3556 HEATHROW DR. 90 00 86
WINSTON-SALEM 27127 919 748-2011
BOWMAN GRAY

SGAMBATI, MARIA S
1106 MELROSE ST. 91 90
WINSTON-SALEM 27103 919 721-0489
BOWMAN GRAY

SHACKELFORD, DONALD P., JR. S
BOX 284, BOWMAN GRAY 91 87
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 725-8605
BOWMAN GRAY

SHUGART, HENRY EDWARD S
1749 CAMDEN RD. 94 90
WINSTON-SALEM 27103 919 724-0308
BOWMAN GRAY

SKRINCOSKY, PETER JOHN S
1608 NORTHWEST BLVD., APT. K 92 90
WINSTON-SALEM 27104 919 721-9127
BOWMAN GRAY

SMIDEBUSH, GERALD CHARLES R
5440 MORAVIAN HEIGHTS LN. 89 90 91
CLEMMONS 27102 919 748-2471
U OF CINCINNATI

SMITH, MICHAEL SCOTT S
140 ENDSLEY AVE. 91 90
WINSTON-SALEM 27106 919 659-6922
BOWMAN GRAY

SMITH, TIMOTHY EARL S
500 GAITHER RD. 94 90
WINSTON-SALEM 27101 919 722-0865
BOWMAN GRAY

SPANGLER, KEVIN MARTIN S
2540 WESTOVER 93 89
WINSTON-SALEM 27103 919 722-7532
BOWMAN GRAY

SPARKS, EDWIN WAYNE, JR. S
459 S. HAWTHORNE RD., APT. F 93 90
WINSTON-SALEM 27103 919 722-9117
BOWMAN GRAY

STROUPE, SAMUEL T. S
2745 CROSSWINDS DR. 92 88
WINSTON-SALEM 27127 919 760-3694
BOWMAN GRAY

TSAO-WU, GLADYS SHI S
2323-D WINSTON COURT 94 90
WINSTON-SALEM 27103 919 724-6634
BOWMAN GRAY

UNDERHILL, THOMAS EDWARD S
201 PENNSYLVANIA AVE. 94 90
WINSTON-SALEM 27104 919 765-3639
BOWMAN GRAY

VAN CLEEFF, MARTIN S
11 CREEKVIEW LANE 92 89
DURHAM 27705 919 723-5437
BOWMAN GRAY

WIESLER, ETHAN RON S
129 WOODBRIAR RD 94-91
WINSTON-SALEM 27106 919 760-3630

WILMOTH, GREGORY JENNINGS S
444 LOCKLAND AVE. 91 89
WINSTON-SALEM 27103 919 773-1480
BOWMAN GRAY

WOODY, JONATHAN DEWEY S
244 OAKWOOD COURT 93 90
WINSTON-SALEM 27103 919 722-6401
BOWMAN GRAY

ZWILLING, GREGORY VINCENT S
2035 W. ACADEMY ST. 94 90
WINSTON-SALEM 27103 919 724-3132
BOWMAN GRAY

ALLERGY

MCCAIN, KENNETH FRANKLIN A AC
223 HARPER STREET 60 60 65
WINSTON-SALEM 27104 919 765-3756
U OF NC

MCCALL, WILLIAM, JR. A /IM AC
1405 PLAZA DRIVE 49 52 55
WINSTON-SALEM 27103 919 765-4131
DUKE

ADOLESCENT MEDICINE

DAVIS, WILLIAM HERSEY, JR. ADL /PD L/RT
723 N. STRATFORD RD. 44 44 47
WINSTON-SALEM 27104 919 724-3312
DUKE

ALLERGY/IMMUNOLOGY

ROSS, ROBERT MITCHELL AI AC
1401-A OLD MILL CIR. 74 77 81
WINSTON-SALEM 27103 919 768-0914
HAHNEMANN

ANESTHESIOLOGY

BAUMAN, LOREN A. AN /PD C
300 S. HAWTHORNE RD. 76 77 91
WINSTON-SALEM 27103 919 948-4294
U OF NEBRASKA

BOGARD, TERRENCE DALE AN AC
5020 KNOB VIEW TRAIL 75 76 80
WINSTON-SALEM 27104 919 760-3954
M C OF WISCONSIN

BROWN, RAEFORD E., JR. AN AC
300 S. HAWTHORNE RD. 80 82 87
WINSTON-SALEM 27103 919 748-4498
U OF NC

BUTTERWORTH, JOHN F., IV AN AC
300 S. HAWTHORNE RD. 79 79 86
WINSTON-SALEM 27103 919 748-3613
MED COLL OF VA

CARTER, MARGARET FRONEBERGER AN AC
FORSYTH MEMORIAL HOSPITAL 75 75 80
3333 SILAS CREEK PARKWAY
WINSTON-SALEM 27103 919 760-5180
BOWMAN GRAY

DEWAN, DAVID MICHAEL AN AC
3333 SILAS CREEK PKWY. 71 71 77
FORSYTH MEM. HOSPITAL
WINSTON-SALEM 27103 919 760-5259
BOWMAN GRAY

DONGRE, SHRIKUMAR SHRIPAD AN AC
1216 BROOK ACRES TRAIL 70 74 78
CLEMMONS 27012 919 760-5180
U OF BOMBAY

EISENACH, JAMES CONRAD AN AC
FORSYTH MEMORIAL HOSP. 82 85 85
OBSTETRIC ANESTHESIA
WINSTON-SALEM 27103 919 760-5295
U OF CALIFORNIA

FLOYD, HERBERT MYNATT AN AC
3551 BUENA VISTA ROAD 71 72 76
WINSTON-SALEM 27106 919 748-8611
BOWMAN GRAY

FONTRIER, TOINETTE HELEN AN AC
8220 WHITE WATER DR. 78 83 85
CLEMMONS 27012 919 766-4321
ALBANY MED COLL

FOREMAN, ARTHUR S. AN AC
300 S. HAWTHORNE RD. 81 81 87
WINSTON-SALEM 27103 919 724-4210
BOWMAN GRAY

GRAVLEE, GLENN PAGE AN AC
1205 CLOVER ST. 74 77 80
WINSTON-SALEM 27101 919 748-4498
NORTHWESTERN U

GREGG, CHARLES ELI AN AC
108 BALLY HO DR. 74 74 90
LEWISVILLE 27023 919 748-4791
BOWMAN GRAY

GRICE, STEPHEN C. AN AC
3932 HAMPTON RD. 83 84 89
CLEMMONS 27012 919 766-0911
BOWMAN GRAY

HARDIE, GREGORY STEVEN AN AC
408 FORSYTH MEDICAL PK 80 81 77
WINSTON-SALEM 27103 919 768-7680
BOWMAN GRAY

HARWOOD, TIMOTHY NEIL AN AC
300 S. HAWTHORNE RD. 84 85 89
WINSTON-SALEM 27103 919 748-4498
U OF MISSOURI

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

HEYNEKER, THEODORE JOHAN AN AC
300 S. HAWTHORNE RD. 79 80 89
WINSTON-SALEM 27103 919 748-4498
GEO WASHINGTON U

HOOD, DAVID DEAN AN AC
1658 S. MARBLEHEAD RD. 79 80 87
CLEMMONS 27012 919 760-5259
U OF KANSAS

JAMES, FRANCIS MARSHALL,III AN AC
15 GRAYLYN PLACE LANE 61 62 76
WINSTON-SALEM 27106 919 723-4690
HAHNEMANN

JOHNSTON, WM. ELLIOTT AN AC
300 S. HAWTHORNE RD. 75 79 87
WINSTON-SALEM 27103 919 748-3613
DUKE

JONES, SARA THOMPSON AN AC
321 BANBURY ROAD 62 62 84
WINSTON-SALEM 27104 919 768-8987
BOWMAN GRAY

KASHTAN, HILLEL I. AN AC
1856 BARNSTABLE RD. 82 82 89
CLEMMONS 27012 919 945-9051
U OF OTTAWA

KELLY, JEFFREY AN /EM AC
406 CLIFFDALE DR. 81 82 85
WINSTON-SALEM 27104 919 748-2591
MED COLL OF OHIO

KING, JEFFREY MILTON AN AC
409 ROLLER MILL DR. 84 85 90
LEWISVILLE 27023 919 748-4498
LOMA LINDA U

MCCONVILLE, JOSEPH FRANCIS AN AC
2257 BRECKNOCK DR. 78 83 86
WINSTON-SALEM 27103 919 765-2259
CREIGHTON U

McINTYRE, ROSS WILLIAM AN AC
FORSYTH MEMORIAL HOSPTIAL 70 73 80
WINSTON-SALEM 27103 919 681-4774
BRITISH COLUMBIA

MIMS, GROVER RAY, III AN AC
2580 COUNTRY CLUB ROAD 66 66 77
WINSTON-SALEM 27104 919 748-5555
BOWMAN GRAY

MORAN, DEBORAH HOLDEN AN AC
300 S. HAWTHORNE RD. 84 86 90
DEPT. OF ANES.
WINSTON-SALEM 27103 919 760-5259
GEORGETOWN U

MORELL, ROBERT CRAIG AN AC
300 S. HAWTHORNE RD. 83 84 90
DEPT. OF ANESTHESIA
WINSTON-SALEM 27103 919 748-4498
MED COLL OF VA

NANZETTA, LEONARD AN L/RT
2756 WINDSOR ROAD 42 46 46
WINSTON-SALEM 27104 919 768-7572
U OF MICHIGAN

OLYMPIO, MICHAEL A. AN AC
397 HOLLINSWOOD AVE. 82 84 85
WINSTON-SALEM 27103 919 768-5217
U OF FLORIDA

PAUCA, ALFREDO LAZO AN AC
300 S. HAWTHORNE RD. 58 58 77
DEPT. OF ANESHTESIA
WINSTON-SALEM 27103 919 748-4473
SAN MARCOS U

PENKAR, SURESH JAGANNATH AN AC
3333 SILAS CREEK PARKWAY 70 71 76
WINSTON-SALEM 27103 919 760-5180
U OF BOMBAY

PETROZZA, PATRICIA HARPER AN AC
300 S. HAWTHORNE RD. 78 80 84
WINSTON-SALEM 27103 919 748-4498
JEFFERSON

PROUGH, DONALD SANDERSON AN /CC AC
1890 RUNNYMEADE RD. 73 77 88
WINSTON-SALEM 27104 919 748-4684
PENN STATE U

RAUCK, RICHARD LEE AN AC
1740 VIRGINIA RD. 82 83 87
WINSTON-SALEM 27104 919 748-2591
BOWMAN GRAY

RIEKER, ROBERT PAUL AN /PDC AC
318 FORSYTH MEDICAL PARK 66 67 85
WINSTON-SALEM 27103 919 768-3212
TUFTS U

ROBERTIE, PAUL GERARD AN AC
1832 PINEHURST DR. 85 86 89
CLEMMONS 27012 919 748-4498
MED COLL OF GA

ROGERS, ANNE THERESA AN AC
300 S. HAWTHORNE RD. 75 75 88
WINSTON-SALEM 27103 919 748-4498
U OF GLASGOW

ROY, RAYMOND CLYDE AN AC
300 S. HAWTHORNE RD. 74 75 83
DEPT. OF ANESTHESIA
WINSTON-SALEM 27104 919 748-4498
TULANE U

ROYSTER, ROGER LEE AN /CC AC
N. C. BAPTIST HOSPITAL 75 76 88
WINSTON-SALEM 27103 919 748-2927
BOWMAN GRAY

SCHKOLNE, BENZION AN AC
300 BEECHCLIFF COURT 72 78 82
WINSTON-SALEM 27104 919 765-9091
U OF CAPE TOWN

SCUDERI, PHILLIP EDWARD AN /CC AC
1728 BUENA VISTA RD. 78 79 81
WINSTON-SALEM 27104 919 748-4297
BOWMAN GRAY

SPEIGHT, KEVIN LEWIS AN AC
300 S. HAWTHORNE RD. 85 86 87
WINSTON-SALEM 27103 919 748-4498
MED U OF SC

TOLMIE, JOHN DUNCAN AN /ADM AC
1543 ABBEY COURT 59 70 76
WINSTON-SALEM 27103 919 748-4524
MCGILL U

TURNER, HENRY CATLETT AN AC
300 S. HAWTHORNE RD. 62 62 68
WINSTON-SALEM 27103 919 748-4791
U OF NC

WALTERS, PAUL ANDREW AN AC
2832 FAIRMONT ROAD 55 55 70
WINSTON-SALEM 27106 919 768-7680
BOWMAN GRAY

WEEKS, DUKE BYRON AN AC
2615 TALLWOOD COURT 65 65 75
WINSTON-SALEM 27106 919 748-4791
BOWMAN GRAY

WHITAKER, CATHY LYNN AN AC
300 S. HAWTHORNE RD. 82 83 89
DEPT. OF ANESTHESIA
WINSTON-SALEM 27103 919 748-4498
U OF KENTUCKY

WILHOIT, RANDALL D., III AN AC
300 S. HAWTHORNE RD. 83 85 88
WINSTON-SALEM 27103 919 748-4498
EMORY U

WILSON, VIRGIL ARCHIBALD AN AC
4193 DIMHOLT COURT 54 54 55
WINSTON-SALEM 27104 919 765-8452
U OF NC

WOODRING, PHYLLIS MCGEE AN AC
286 TORRANCE DR. 84 84 90
WINSTON-SALEM 27106 919 768-5441
U OF NC

WOODRUM, GEORGE ORRIS AN R
2220 ELIZABETH AVE. 87 88 90
WINSTON-SALEM 27103 919 723-2360
PENN STATE U

CARDIOVASCULAR DISEASES

EDMONDS, JOHN HENRY, JR. CD /IM AC
BOWMAN GRAY SCH. OF MED. 56 56 70
WINSTON-SALEM 27103 919 748-4208
BOWMAN GRAY

GADDY, JOE ELLIS, JR. CD /IM AC
3073 TRENWEST DR. 71 71 78
WINSTON-SALEM 27103 919 768-0437
U OF NC

GIVENS, DAVIDSON HOWARD CD /IM A
1399 WESTGATE CENTER DR. 76 76
WINSTON-SALEM 27103 919 768-42
BOWMAN GRAY

GREEN, HAROLD D. CD L/F
3619 DEWSBURY ROAD 31 31
WINSTON-SALEM 27104 919 765-50
CASE WESTERN RES

GUY, CLIFFORD RICHARD CD /IM A
250 CHARLOIS BOULEVARD 67 68
WINSTON-SALEM 27103 919 768-47
MED SCH-UMDNJ

HAISTY, WESLEY KENNETH, JR. CD /IM A
300 S. HAWTHORNE ROAD 66 67
WINSTON-SALEM 27103 919 748-467
NORTHWESTERN U

HARRIS, MILTON DEAN CD /IM A
3073 TRENWEST DR. 68 69
WINSTON-SALEM 27103 919 768-043
U TX-SOU.WESTERN

HEADLEY, ROBERT NELSON CD /IM A
300 S. HAWTHORNE RD. 56 57
WINSTON-SALEM 27103 919 748-433
U OF MARYLAND

HOLLAND, JAMES P. CD A
3073 TRENWEST DR. 80 82
WINSTON-SALEM 27103 919 768-043
U OF NC

KAHL, FREDERIC ROSS CD /IM A
300 S. HAWTHORNE RD. 67 68
WINSTON-SALEM 27103 919 748-426
U OF CHICAGO

KEITH, THEODORE ALLEN CD A
3073 TRENWEST DR. 67 67
WINSTON-SALEM 27103 919 768-043
BOWMAN GRAY

KIRKLAND, STEPHEN M. CD /IM A
3073 TRENWEST DR. 83 86
WINSTON-SALEM 27103 919 768-043
MED U OF SC

KLOPFENSTEIN, HAROLD S. CD A
300 S. HAWTHORNE RD. 66 67
DIV. OF CARDIOLOGY
WINSTON-SALEM 27103 919 748-271
U OF MIAMI

KUTCHER, MICHAEL A. CD /IM A
300 S. HAWTHORNE RD. 74 76
WINSTON-SALEM 27103 919 748-296
JEFFERSON

LITTLE, WILLIAM C. CD A
300 S. HAWTHORNE RD. 75 78
DIV. OF CARDIOLOGY
WINSTON-SALEM 27103 919 748-434
OHIO STATE U

MEANS, WILLIAM ELBERT CD /IM A
1399 WESTGATE CENTER DR. 74 74
WINSTON-SALEM 27103 919 768-426
BOWMAN GRAY

MILLER, HENRY SHELTON, JR. CD /IM A
300 S. HAWTHORNE RD. 54 54
WINSTON-SALEM 27103 919 748-446
BOWMAN GRAY

NOMEIR, ABDEL-MOHSEN CD /IM A
3219 PENSBY ROAD 52 72
WINSTON-SALEM 27106 919 748-458
ALEXANDRIA EGYPT

ORBOCK, JACOB ALEXANDER CD /IM A
250 CHARLOIS BOULEVARD 62 65
WINSTON-SALEM 27103 919 768-473
JEFFERSON

RUFTY, ALFRED JACKSON, JR. CD /IM A
BOWMAN GRAY, DEPT. OF MED. 61 61
WINSTON-SALEM 27103 919 748-446
LA STATE U

SAWYER, CHARLES GLENN CD /IM L/RT
905 GOODWOOD ROAD 44 44
WINSTON-SALEM 27106 919 748-446
BOWMAN GRAY

WALLEY, BRUCE DOUGLAS CD /CDS A
2827 LYNDHURST AVE. STE. 205 74 74
WINSTON-SALEM 27103 919 768-953
BOWMAN GRAY

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

ATTS, LESTER EARL CD /IM AC
57 57 57
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-4581
BOWMAN GRAY

OPP, JAMES DENNIE, JR. CD /IM AC
66 66 74
602 FORSYTH MEDICAL PARK
WINSTON-SALEM 27103 919 765-4871
BOWMAN GRAY

RDIOVASCULAR SURGERY

ORDELL, A. ROBERT CDS /TS AC
47 50 57
BOWMAN GRAY SCH. OF MED.
WINSTON-SALEM 27103 919 748-4672
JOHNS HOPKINS

ROSBY, IVAN KEITH CDS /TS AC
63 63 87
2827 LYNDHURST AVE., #205-A
WINSTON-SALEM 27103 919 768-9510
U OF QUEENSLAND

ILLS, STEPHEN ALAN CDS /TS AC
71 71 81
3320 PADDINGTON LANE
WINSTON-SALEM 27106 919 748-4488
MCGILL U

IORGAN, JOEL CLARENCE CDS /TS AC
78 79 83
2827 LYNDHURST AVE.,STE. 205
WINSTON-SALEM 27103 919 768-9510
BOWMAN GRAY

ORIANO, CLINTON REYES CDS AC
69 69 78
1901 S. HAWTHORNE RD. STE. 340
WINSTON-SALEM 27103 919 765-6277
U OF EAST

UCKER, WILLIAM YORK, JR. CDS /TS AC
68 68 86
300 S. HAWTHORNE ROAD
WINSTON-SALEM 27103 919 748-4487
BOWMAN GRAY

VALLENHAUPT, STEPHEN L. CDS /TS AC
78 82 87
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-2281
BOWMAN GRAY

HILD NEUROLOGY

RIELA, ANTHONY RICHARD CHN /N AC
79 81 85
7630 SWEET GUM DR.
IRVING, TX 75063 919 998-7646
MED SCH-UMDNJ

HILD PSYCHIATRY

ALLEN, DAVID HENRY CHP /P AC
64 64 72
1334 ASHLEY SQUARE
WINSTON-SALEM 27103 919 765-1866
WASHINGTON U

HABERKERN, ROY CONRAD CHP /P AC
69 69 74
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-4220
DUKE

ERMATOLOGY

HENRICHS, W. DEAN D /DMP AC
65 66 84
250 CHARLOIS BLVD.
WINSTON-SALEM 27103 919 768-6221
U OF KANSAS

HESS, SUZANNE POWELL D /IM R
85 86 81
6725 BRAMBLEBUSH CT.
CLEMMONS 27012 919 748-2968
EAST CAROLINA U

HEYMANN, ROBERT CURTIS D AC
60 61 65
118 FORSYTH MEDICAL PARK
WINSTON-SALEM 27103 919 765-1841
BOWMAN GRAY

HOWELL, CHARLES MAITLAND, JR. D L
37 37 46
340 PERSHING AVENUE
WINSTON-SALEM 27103 919 725-8422
U OF PENN

JAMES, GEORGE W. D L
40 40 49
1020 WELLINGTON RD.
WINSTON-SALEM 27106 919 723-9716
U OF TENNESSEE

JORIZZO, JOSEPH L. D AC
75 76 86
300 S. HAWTHORNE RD.
DEPT. OF DERMATOLOGY
WINSTON-SALEM 27103 919 748-2768
BOSTON U

LESHIN, BARRY D AC
81 81 86
300 S. HAWTHORNE RD.
DEPT. OF DERMATOLOGY
WINSTON-SALEM 27103 919 748-2768
U OF TX-HOUSTON

LONG, JOHN CLAYTON D AC
73 73 77
1401-C OLD MILL CIRCLE
WINSTON-SALEM 27103 919 765-8121
U OF NC

RHOADES, VADE G. D AC
60 60 68
2240-98 CLOVERDALE AVE.
W-S PROF. BLDG. PO BOX 5128
WINSTON-SALEM 27113 919 723-1834
BOWMAN GRAY

SHERERTZ, ELIZABETH F. D AC
78 88 89
300 S. HAWTHORNE RD.
DEPT. OF DERMATOLOGY
WINSTON-SALEM 27103 919 748-3926
U OF VIRGINIA

SOUTHARD, JOHN K., JR. D AC
67 73 87
3111 MAPLEWOOD AVE., STE. 107
WINSTON-SALEM 27103 919 768-1280
BOSTON U

ZANOLLI, MICHAEL DOMINIC D AC
81 81 86
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-2768
U OF TENNESSEE

DIAGNOSTIC RADIOLOGY

AURINGER, SAM THOMAS DR AC
84 86 90
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-2818
SUNY-SYRACUSE

BALL, MARSHALL RAY DR AC
68 68 77
BOWMAN GRAY, DEPT. OF RAD.
WINSTON-SALEM 27103 919 748-4435
BOWMAN GRAY

BOWER, STEPHEN LEE DR AC
79 79 80
3155 MAPLEWOOD AVENUE
WINSTON-SALEM 27103 919 760-5874
WEST VA U

DYER, RAYMOND BRUCE DR AC
77 79 89
300 S. HAWTHORNE RD.
DEPT. OF RADIOLOGY
WINSTON-SALEM 27103 919 748-4316
U OF VIRGINIA

FARIS, JOHN CHARLES DR /NM AC
67 67 73
2803 LYNDHURST AVE.
WINSTON-SALEM 27103 919 768-1021
BOWMAN GRAY

FARRELL, FRANK WILSON, JR. DR AC
62 62 77
3155 MAPLEWOOD AVENUE
WINSTON-SALEM 27103 919 760-5878
BOWMAN GRAY

HUNT, THOMAS HOLMES DR /NR AC
71 71 77
3155 MAPLEWOOD AVENUE
WINSTON-SALEM 27103 919 760-5949
BOWMAN GRAY

KERNER, THEODORE CHARLES,JR. DR C
85 87 90
3155 MAPLEWOOD AVE.
WINSTON-SALEM 27103 919 765-2902
U OF NC

LEINBACH, LAURENCE B. DR AC
52 52 58
BOWMAN GRAY SCH. OF MED.
WINSTON-SALEM 27103 919 748-3416
HARVARD

MILNER, THOMAS HAMILTON, III DR AC
68 69 75
3155 MAPLEWOOD AVENUE
WINSTON-SALEM 27104 919 773-3877
MED COLL OF GA

MOODY, DIXON MCGUIRE DR AC
63 63 74
BOWMAN GRAY-RADIOLOGY
WINSTON-SALEM 27103 919 748-4435
U TX-SOU.WESTERN

NAYLOR, LEE ANN A. DR AC
83 85 86
2803 LYNDHURST AVE.
WINSTON-SALEM 27103 919 768-1021
MED U OF SC

OTT, DAVID JAMES DR AC
71 72 78
4761 GREY FOX COURT
WINSTON-SALEM 27104 919 765-7633
U OF MICHIGAN

PEPPER, FRANCIS DEWITT, JR. DR RT
56 56 64
3155 MAPLEWOOD AVENUE
WINSTON-SALEM 27103 919 765-2702
U OF NC

REID, RICHARD HAROLD DR C
82 82 90
3155 MAPLEWOOD AVE.
WINSTON-SALEM 27103 919 765-2702
BOWMAN GRAY

RIESER, GEOFFREY DAVIS DR AC
85 87 85
3155 MAPLEWOOD AVE.
WINSTON-SALEM 27103 919 760-5875
MED U OF SC

SANDERFORD, JAMES LYON, JR. DR /NM AC
78 78 78
3155 MAPLEWOOD AVENUE
WINSTON-SALEM 27103 919 760-5876
U OF NC

SCHULTZ, JOHN LOESCH DR /NM C
61 61 73
325 FAIRFAX DR.
WINSTON-SALEM 27104 919 659-8665
BOWMAN GRAY

WIGGINS, THOMAS BARNES DR AC
83 85 81
3155 MAPLEWOOD AVE.
WINSTON-SALEM 27103 919 760-5874
BOWMAN GRAY

WOLFMAN, NEIL TURNER DR AC
71 72 79
BOWMAN GRAY, DEPT. OF RAD.
WINSTON-SALEM 27103 919 748-2471
ALBANY MED COLL

YAP, MARK ANASTACIO DR R
86 86 88
806 BRICKWOOD PL.
WINSTON-SALEM 27127 919 748-4316
MISSOURI U-KC

EMERGENCY MEDICINE

ALSON, ROY LEE EM AC
85 85 83
300 S. HAWTHORNE RD.
BOWMAN GRAY,DEPT.OF EMERG.MED.
WINSTON-SALEM 27103 919 748-2193
BOWMAN GRAY

HESS, MARK ROLAND EM AC
85 86 88
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-4625
EAST CAROLINA U

LEONARD, RALPH BEAUMONT EM AC
77 78 81
300 S. HAWTHORNE ROAD
WINSTON-SALEM 27103 919 748-4626
MED U OF SC

NELSON, DAVID STEPHEN EM /GS AC
61 61 73
248 FLINTSHIRE ROAD
WINSTON-SALEM 27104 919 765-3950
BOWMAN GRAY

PETRILLI, ROBERT EM AC
82 83 84
300 S. HAWTHORNE RD.
DEPT. OF EMERGENCY MEDICINE
WINSTON-SALEM 27103 919 748-4625
U OF SOU FLORIDA

PODGORNY, GEORGE EM /GS AC
62 69 73
2115 GEORGIA AVENUE
WINSTON-SALEM 27104 919 727-1161
BOWMAN GRAY

SAYERS, DANIEL GARVIN EM AC
77 77 78
2804 MONTCLAIR ROAD
WINSTON-SALEM 27106 919 725-3304
OHIO STATE U

SCHWARTZ, EARL EM AC
74 75 77
BOWMAN GRAY SCH OF MED
DEPT. OF EMERGENCY MEDICINE
WINSTON-SALEM 27103 919 748-4625
BOWMAN GRAY

TANNER, DAUNE DAUGHERTY EM AC
84 85 85
163 DEER RUN DR.
LEWISVILLE 27023 919 765-9328
U OF KENTUCKY

TIMERDING, BEVERLY L. EM AC
83 83 90
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-4625
U OF CINCINNATI

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

ENDOCRINOLOGY

CANTLEY, LARRY KEITH END AC
2933 MAPLEWOOD AVE. 77 77 87
WINSTON-SALEM 27103 919 765-1640
WEST VA U

LOWDER, STEPHEN CARLTON END /IM AC
3310 BROOKVIEW HILLS BLVD. 66 66 90
SUITE 202
WINSTON-SALEM 27103 919 765-0020
U OF VIRGINIA

MILLER, EMERY CLYDE, JR. END /IM L/RT
1905 W. FIRST ST. 49 53 55
WINSTON-SALEM 27104 919 723-5636
JOHNS HOPKINS

MILLER, NORMAN ERIC END /IM AC
300 S. HAWTHORNE RD. 68 69 88
WINSTON-SALEM 27103 919 748-2076
MANCHESTER-U.K.

OBER, KARL PATRICK END /IM AC
300 S. HAWTHORNE RD. 74 76 82
WINSTON-SALEM 27103 919 748-6027
U OF FLORIDA

PHIPPS, CARL SPENCER END /IM AC
3333 SILAS CREEK PARKWAY 62 62 66
WINSTON-SALEM 27103 919 760-5960
U OF NC

FAMILY PRACTICE

ADLER, MICHAEL L. FP AC
300 S. HAWTHORNE RD. 73 75 90
WINSTON-SALEM 27103 919 748-4479
U OF ILLINOIS

BEARD, ELDON S. FP AC
3640-A WESTGATE CENTER CIR. 82 83 87
WINSTON-SALEM 27103 919 768-6682
BOWMAN GRAY

BILLINGS, JACK SMITH FP AC
540 HOLMES DRIVE 58 59 62
RURAL HALL 27045 919 969-9158
BOWMAN GRAY

BOWMAN, MARJORIE ANN FP /GPM AC
300 S. HAWTHORNE RD. 76 77 77
DEPT. OF FAMILY MEDICINE
WINSTON-SALEM 27103 919 748-3724
JEFFERSON

BROWNING, DOUGLAS GUY FP R
2050 CRAIG ST., APT. 23 89 00 86
WINSTON-SALEM 27103 919 723-6603
BOWMAN GRAY

CELESTINO, FRANK SAMUEL FP AC
3400 YORK ROAD 78 82 84
WINSTON-SALEM 27104 919 748-2258
U OF ROCHESTER

EDWARDS, JOEL LYNN FP AC
P. O. BOX 666 76 76 80
MOCKSVILLE 27028 704 634-6128
BOWMAN GRAY

FLORES, RODOLFO FLORES FP /IM AC
P. O. BOX 96 62 74 74
DANBURY 27016 919 593-8281
MANILA CENTRAL U

FOLDS, WILLIAM FRANKLIN FP AC
2909 MAPLEWOOD AVE. 62 62 64
WINSTON-SALEM 27103 919 768-9575
BOWMAN GRAY

FOSTER, BOB MAXWELL FP AC
P. O. BOX 427 57 57 60
MOCKSVILLE 27028 704 634-2108
BOWMAN GRAY

GAINOR, CHARLES JOSEPH FP AC
147 COLUMBINE DR. 84 85 89
WINSTON-SALEM 27103 919 722-9535
BOWMAN GRAY

GARRETT, JOHN BOSTIAN, SR. FP L
2926 MAIN ST. 51 51 52
PO BOX 220
WALKERTOWN 27051 919 595-2751
BOWMAN GRAY

HAMPTON, JAMES HARRIS, JR. FP AC
PO BOX 325 52 52 58
SUNNY ACRES SHOPPING CTR.
LEWISVILLE 27023 919 945-5846
BOWMAN GRAY

JACKSON, DAVID STONE, JR. FP AC
300 S. HAWTHORNE ROAD 73 73 80
WINSTON-SALEM 27103 919 748-2832
BOWMAN GRAY

JONES, CHAMP MCMILLIAN, JR. FP AC
2805 LYNDHURST AVE. 74 78 86
WINSTON-SALEM 27103 919 768-8890
MED U OF SC

KELLY, ROBERT GEORGE FP AC
2805 LYNDHURST AVENUE 74 75 79
WINSTON-SALEM 27103 919 768-8890
MED U OF SC

KELLY, WILLIAM SHERWOOD FP /GER AC
280 S. BROAD ST. #B 81 81 84
KERNERSVILLE 27284 919 993-2224
U OF LOUISVILLE

KIMBERLY, GEORGE DOUGLAS FP AC
PO BOX 1047 58 58 60
MOCKSVILLE 27028 704 634-1124
BOWMAN GRAY

KNUDSON, MARK PAUL FP AC
300 S. HAWTHORNE RD. 82 83 87
WINSTON-SALEM 27103 919 748-2246
U OF VIRGINIA

KONEN, JOSEPH C. FP /GPM AC
300 S. HAWTHORNE RD. 79 81 88
WINSTON-SALEM 27103 919 748-6521
SUNY-SYRACUSE

LARSON, KIP LEROY FP C
7811 N. POINT BLVD. 78 79 86
WINSTON-SALEM 27106 919 789-0454
EASTERN VA

LATHAM-SADLER, BRENDA FP AC
8519 BROOK MEADOW LN. 82 85 87
LEWISVILLE 27023 919 945-4439
BOWMAN GRAY

LENDLE, DONALD LAWRENCE FP AC
147 COLUMBINE DR. 74 75 82
WINSTON-SALEM 27106 919 722-9535
U OF CALIFORNIA

LITTLEJOHN, THOMAS WILLARD, III FP AC
2805 LYNDHURST AVENUE 73 73 77
WINSTON-SALEM 27103 919 768-8890
U OF NC

MCGANN, KAREN PATRICIA FP AC
300 S. HAWTHORNE RD. 77 77 88
WINSTON-SALEM 27103 919 748-2230
U OF ARKANSAS

MINICK, RUSSELL CLARK FP AS
1504 WILLIAMS RD. 46 46 72
LEWISVILLE 27023
TEMPLE U

MORELL, VENITA WEAVER FP C
300 S. HAWTHORNE RD. 83 85 90
WINSTON-SALEM 27103 919 748-4479
MED COLL OF VA

NEWSOME, SAMUEL CARL FP AC
P. O. BOX 1129 75 75 73
KING 27021 919 983-4346
BOWMAN GRAY

NIFONG, FRANK MILLER FP L/RT
P. O. BOX 988 43 43 48
CLEMMONS 27012 919 766-6811
JEFFERSON

PARRIS, ALVA EDWARD FP /OM AC
2240 CLOVERDALE AVE., STE. 219 53 53 54
WINSTON-SALEM 27103 919 725-5881
BOWMAN GRAY

PATTERSON, THOMAS R. FP AC
P.O. BOX 968 78 81 91
CLEMMONS 27012 919 766-0547
MED COLL OF VA

PEARCE, KEVIN ANDREW FP C
300 S. HAWTHORNE RD. 83 84 90
DEPT. OF FAMILY MEDICINE
WINSTON-SALEM 27102 919 748-2576
U OF FLORIDA

PHILLIPS, WESLEY FLETCHER FP AC
P. O. BOX 727 62 62 67
KERNERSVILLE 27284 919 993-8181
BOWMAN GRAY

RECORD, CHARLES LEO FP AC
PO BOX 567 86 88 90
KERNERSVILLE 27285 919 993-8181
BOWMAN GRAY

RECORD, S. LEO, JR. FP AC
P. O. BOX 627 64 65 6(
KERNERSVILLE 27284 919 993-818
BOWMAN GRAY

RENFROE, MELANIE STRICKLAND FP AC
PO BOX 385 86 87 9(
MOCKSVILLE 27028 704 634-750
U OF MISSISSIPPI

ROMM, FREDRIC JAY FP /GPM AC
300 S. HAWTHORNE RD. 70 71 8
DEPT. OF FAMILY MEDICINE
WINSTON-SALEM 27103 919 748-222
HARVARD

ROSEN, ROBERT DEAN FP AC
147 COLUMBINE DRIVE 79 80 8
WINSTON-SALEM 27106 919 722-953
U OF PITTSBURGH

SCHMID, HERMAN ERNEST, JR. FP /GER AC
720 TAM-O-SHANTER TR. 55 56 7
WINSTON-SALEM 27103 919 765-400
U OF ILLINOIS

STEPHENS, WAYLAND C. FP AC
280-B S. BROAD ST. 80 83 8
KERNERSVILLE 27284 919 768-957
DUKE

SUTTON, HOMER GEORGE FP AC
3722 REYNOLDA ROAD 53 53 5
WINSTON-SALEM 27106 919 924-290
BOWMAN GRAY

TAYLOR, MARY ANN HAMPTON FP AC
4450 GREEN MEADOWS 60 60 6
WINSTON-SALEM 27106 919 759-521
BOWMAN GRAY

TOLBERT, FRANKLIN LEE FP AC
PO BOX 666 83 84 8
MOCKSVILLE 27028 919 634-612
MED COLL OF VA

VAN ZANDT, KEITH BERGEN FP AC
2805 LYNDHURST AVE. 80 87 7
WINSTON-SALEM 27103 919 768-889
BOWMAN GRAY

WALKER, WILLIAM THOMAS FP L/RT
202 S. CHERRY ST. 49 50 5
KERNERSVILLE 27284 919 993-201
MED COLL OF VA

WILLIAMS, WILLIAM C. FP AC
300 S. HAWTHORNE RD. 84 85 8
WINSTON-SALEM 27103 919 748-447
NORTHWESTERN U

GASTROENTEROLOGY

AUSTIN, WILLIAM ELLIOT GE /IM AC
1830 HAWTHORNE ROAD 75 76 8
WINSTON-SALEM 27103 919 765-046
MED COLL OF VA

FINA, MICHAEL FRANCIS GE /IM AC
1901 S. HAWTHORNE RD., #310 75 76 8
WINSTON-SALEM 27103 919 760-434
NEW YORK MED COL

GIBBS, JAMES S. GE /IM AC
1830 S. HAWTHORNE RD. 67 67 7
WINSTON-SALEM 27103 919 765-046
MED COLL OF VA

GILLIAM, JOHN HUGH, III GE /IM AC
300 S. HAWTHORNE ROAD 70 70 8
BOWMAN GRAY SCH. OF MED
WINSTON-SALEM 27103 919 748-460
MED COLL OF VA

KERR, ROBERT MORTON GE /IM AC
BOWMAN GRAY, DEPT. OF MED. 61 66 7
WINSTON-SALEM 27103 919 748-460
CORNELL U

MURPHY, DANIEL WM. GE AC
1901 S. HAWTHORNE RD.,STE. 310 81 82 8
WINSTON-SALEM 27103 919 760-434
U OF CINCINNATI

PETERS, RANDY ALAN GE /IM AC
1830 S. HAWTHORNE RD. 82 83 8
WINSTON-SALEM 27103 919 765-046
U OF VIRGINIA

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

OUFAIL, WALTER MICHEL GE /IM AC
1901 S. HAWTHORNE RD., #310 57 66 66
WINSTON-SALEM 27103 919 760-4340
CAIRO U

OHMER, MARCUS FRANK, JR. GE /IM AC
9808 REYNOLDA RD. 52 52 56
TOBACCOVILLE 27050 919 924-0857
BOWMAN GRAY

VEEKS, LANDON EARL GE /IM C
2808 MAPLEWOOD AVENUE 73 73 78
WINSTON-SALEM 27103 919 768-6211
MED COLL OF VA

VEINBERG, RICHARD BARRY GE AC
300 S. HAWTHORNE RD. 75 76 90
WINSTON-SALEM 27103 919 748-4612
JOHNS HOPKINS

VU, WALLACE CHI LI GE /IM AC
300 S. HAWTHORNE RD. 66 66 75
WINSTON-SALEM 27103 919 748-4603
U OF HONG KONG

YNECOLOGICAL ONCOLOGY

OBSON, VERNON WAKEFIELD GO /GYN AC
1901 S. HAWTHORNE RD. STE. 360 73 77 80
WINSTON-SALEM 27103 919 765-1464
U OF KANSAS

ENERAL PRACTICE

BURKHART, CHARLES ANDREW GP AC
345 WESTVIEW DRIVE, S.W. 57 57 75
WINSTON-SALEM 27104 919 761-1541
OHIO STATE U

STALLINGS, DAVEY BINGHAM GP AC
P. O. BOX 69 57 57 61
RURAL HALL 27045 919 969-9158
BOWMAN GRAY

VREELAND, WALLING D., JR. GP AC
3910 COUNTRY CLUB ROAD 55 55 57
WINSTON-SALEM 27104 919 765-0170
BOWMAN GRAY

WHITAKER, RICHARD HARPER GP L/RT
120 N. CHERRY ST. 34 34 39
KERNERSVILLE 27284 919 993-4242
U OF PENN

ENERAL SURGERY

ALBERTSON, DAVID ALLEN GS AC
BOWMAN GRAY 72 72 73
DEPT. OF SURGERY
WINSTON-SALEM 27103 919 748-4442
U OF VIRGINIA

DEAN, RICHARD HENRY GS /VS AC
300 S. HAWTHORNE RD. 68 68 87
DEPT. OF SURGERY
WINSTON-SALEM 27103 919 748-4443
MED COLL OF VA

ELESHA, WILLIAM GS L
1900 HAWTHORNE RD. #214 45 53 53
WINSTON-SALEM 27103 919 765-1610
AMER.U OF BEIRUT

FERGUSON, WILLIAM CLAY GS /TS AC
2680 REYNOLDS DRIVE 60 60 69
WINSTON-SALEM 27104 919 765-8020
U OF NC

GLOD, ALBERT PAUL GS /TS L/RT
152 MUIRFIELD DR. 43 44 54
WINSTON-SALEM 27104 919 725-3702
BOWMAN GRAY

GOCO, ISAIAS ISMAEL GS /CDS AC
1901 S.HAWTHORNE RD.,STE.220 56 62 63
WINSTON-SALEM 27103 919 768-4710
U OF SANTO TOMAS

HANSEN, KIMBERLEY J. GS /VS AC
300 S. HAWTHORNE RD. 80 81 88
WINSTON-SALEM 27103 919 748-4151
U OF ALABAMA

HARR, CHARLES DULANEY GS /CDS R
719 WESTVIEW DRIVE 83 83 83
WINSTON-SALEM 27103 919 748-2011
BOWMAN GRAY

HEDRICK, RICHARD ELI GS L/RT
1999 GEORGIA AVE. 43 43 47
WINSTON-SALEM 27104 919 724-5454
MED U OF SC

HIGHTOWER, FELDA GS /TS L/RT
1244 ARBOR RD. #233 33 33 36
WINSTON-SALEM 27104 919 727-1661
U OF PENN

HINES, MICHAEL HERBERT GS R
723 FENIMORE ST. 86 86 84
WINSTON-SALEM 27103 919 777-0226
BOWMAN GRAY

HUDSPETH, ALLEN SHERRILL GS /TS AC
300 S. HAWTHORNE RD. 53 53 63
WINSTON-SALEM 27103 919 748-4359
BOWMAN GRAY

KOOKEN, KEITH ROBERT GS AC
2915 LYNDHURST AVENUE 60 60 67
WINSTON-SALEM 27103 919 765-5221
INDIANA U

KOONTZ, THOMAS JEFFREY GS AC
4250 ALLISTAIR ROAD 66 66 74
WINSTON-SALEM 27104 919 765-5221
U OF NC

LOGGIE, BRIAN WM. GS /ON AC
300 S. HAWTHORNE RD. 79 82 88
WINSTON-SALEM 27103 919 748-6272
MCGILL U

MALLOY, H. REMBERT GS L/RT
2020 NEW WALKERTOWN ROAD 39 44 63
WINSTON-SALEM 27101 919 723-3729
HOWARD U

MEANS, ROBERT LEE GS L/RT
4001 PHILPARK DR. 47 48 55
WINSTON-SALEM 27106
BOWMAN GRAY

MEREDITH, JESSE HEDGEPETH GS /TS AC
BOWMAN GRAY-SURGERY 51 60 64
WINSTON-SALEM 27103 919 748-4278
CASE WESTERN RES

MIDDLETON, R. BRUCE GS AC
2915 LYNDHURST AVE. 78 78 88
WINSTON-SALEM 27103 919 765-5221
LSU-SHREVEPORT

MONTERO-PEARSON, PER M. GS AC
PO BOX 407 77 79 88
MOCKSVILLE 27028 704 634-6121
AUTONOMA-MADRID

MUTTON, THOMAS PAUL GS /VS AC
2933 MAPLEWOOD AVENUE 73 73 87
WINSTON-SALEM 27103 919 768-9198
BOWMAN GRAY

MYERS, RICHARD THOMAS GS /TS L/RT
613 GLEN ECHO TRAIL 43 43 50
WINSTON-SALEM 27106 919 748-4541
U OF PENN

NOLAN, ROBERT EARL GS /VS AC
1901 S. HAWTHORNE, STE. 210 55 60 60
WINSTON-SALEM 27103 919 765-5101
CASE WESTERN RES

PARKER, PETER EMENS GS /VS AC
2933 MAPLEWOOD AVENUE 60 60 71
WINSTON-SALEM 27103 919 765-0155
OHIO STATE U

PENNELL, TIMOTHY CLINARD GS /TS AC
300 S. HAWTHORNE RD. 60 60 72
DEPT. OF SURGERY
WINSTON-SALEM 27103 919 748-4671
BOWMAN GRAY

PLONK, GEORGE WEBB, JR. GS /VS AC
BOWMAN GRAY - SURGERY 73 73 81
WINSTON-SALEM 27103 919 748-4449
BOWMAN GRAY

RABIL, WILLIAM EDMOND GS /GYN L/RT
1755 BUENA VISTA RD. 46 46 52
WINSTON-SALEM 27104 919 722-3691
U OF VIRGINIA

ROHR, MICHAEL S. GS AC
300 S. HAWTHORNE RD. 67 67 90
WINSTON-SALEM 27103 919 748-4541
TULANE U

SLATE, FRANCIS WESLEY GS L/RT
P. O. BOX 407 47 57 59
MOCKSVILLE 27028 704 634-6121
U OF CAPE TOWN

THOMASON, ROBERT BRADLEY,III GS /VS C
2023 ELIZABETH AVE. 84 86 85
WINSTON-SALEM 27103 919 765-5221
BOWMAN GRAY

WELCH, EARL PARKS, JR. GS /TS AC
2825 LYNDHURST AVE. STE. 105 57 57 65
WINSTON-SALEM 27103 919 760-3112
U OF NC

GYNECOLOGY

BARRETT, ROLLAND JOHN, II GYN /ON AC
300 S. HAWTHORNE RD. 79 80 85
WINSTON-SALEM 27103 919 748-2353
U OF MICHIGAN

GRIFFITH, MARY IRENE GYN L/RT
515 S. HAWTHORNE RD. 42 42 46
WINSTON-SALEM 27103 919 722-2255
U OF TENNESSEE

HOMESLEY, HOWARD DAVID GYN /ON AC
DEPT. OF OBG, BOWMAN GRAY 67 67 75
WINSTON-SALEM 27103 919 748-4022
U OF NC

MAY, WILLIAM JOSEPH GYN /OBG L
300 S. HAWTHORNE ROAD 44 44 49
WINSTON-SALEM 27103 919 748-4595
BOWMAN GRAY

MONROE, JOHN HOWARD GYN L/RT
236 PLYMOUTH AVE. 47 47 57
WINSTON-SALEM 27104 919 765-2802
HARVARD

OGBURN, LUNDIE CALVIN GYN L/RT
4740 FLANDERS BLVD. 28 28 36
TALLAHASSEE, FL 32303
JEFFERSON

PIPPITT, CHARLES H., JR. GYN /ON AC
1901 S.HAWTHORNE RD.,STE.,360 79 82 79
WINSTON-SALEM 27103 919 765-1464
BOWMAN GRAY

SOPER, HERBERT ALVA GYN /OBS AC
1901 S. HAWTHORNE RD. STE. 320 60 67 68
WINSTON-SALEM 27103 919 768-1180
U OF ARKANSAS

STURKIE, H. RAY GYN AC
1365 WESTGATE CENTER DR. 55 64 64
SUITE 1-C
WINSTON-SALEM 27103 919 768-8302
U OF ALABAMA

WALL, ROSCOE LEGRAND, JR. GYN /END L/RT
440 SHERWOOD FOREST ROAD 40 40 50
WINSTON-SALEM 27104 919 765-3383
JEFFERSON

HEMATOLOGY

ALLEN, ELMS LEACH HEM /ON AC
3314 HEALY DR. STE. 107 66 66 74
WINSTON-SALEM 27103 919 768-2521
BOWMAN GRAY

INFECTIOUS DISEASES

BASS, DAVID ALDEN ID /IM AC
300 S. HAWTHORNE RD. 68 74 83
WINSTON-SALEM 27103 919 748-4322
JOHNS HOPKINS

LINK, ARTHUR STANLEY, JR. ID /IM AC
3310 BROOKVIEW HILLS, #204 72 74 79
WINSTON-SALEM 27103 919 765-8420
COLUMBIA U

MARX, RICHARD SAMUEL ID /IM AC
3310 BROOKVIEW HILLS BLVD #204 74 74 80
WINSTON-SALEM 27103 919 765-8420
BOWMAN GRAY

PEACOCK, JAMES EDWARD, JR. ID /IM AC
300 S. HAWTHORNE RD. 75 76 83
WINSTON-SALEM 27103 919 748-4507
U OF NC

PEGRAM, PAUL SAMUEL, JR ID /IM AC
2332 ELIZABETH AVENUE 70 70 80
WINSTON-SALEM 27103 919 748-4246
BOWMAN GRAY

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

INTERNAL MEDICINE

ARONSON, PHILIP R. IM /CD AC
BOX 631 48 55 87
BERMUDA RUN 27006 919 765-3471
DOWNSTATE ME CTR

BAHNSON, EDWARD REID IM /ADM L/RT
2725 WINDSOR ROAD 42 42 48
WINSTON-SALEM 27104 919 768-7784
U OF PENN

BARTON, JOHN HOMER, JR. IM R
160 SARATOGA ST. 87 87 85
WINSTON-SALEM 27103 919 765-7946
BOWMAN GRAY

BLOOMFIELD, ROBERT LEE IM RT
651 BRENTWOOD CT. 77 79 82
WINSTON-SALEM 27101 919 727-8165
DUKE

BOYETTE, GRAY THOMAS IM /GE AC
2933 MAPLEWOOD AVENUE 60 60 66
WINSTON-SALEM 27103 919 765-1640
BOWMAN GRAY

BRASHER, BRUCE UMBERTO IM AC
250 CHARLOIS BLVD. 81 84 91
WINSTON-SALEM 27103
DUKE 919 260-4750

BRICE, ROBERT SAMUEL, JR. IM /GE AC
1901 HAWTHORNE RD., STE. 310 60 60 64
WINSTON-SALEM 27103 919 760-4340
DUKE

BROWN, MALCOLM M. IM /RHU AC
1900 S. HAWTHORNE RD. 73 76 89
312 FORSYTH MEDICAL PK.
WINSTON-SALEM 27103 919 659-9218
COLUMBIA U

BURKART, JOHN IM /NEP AC
300 S. HAWTHORNE RD. 79 80 87
WINSTON-SALEM 27103 919 748-3963
RUSH MED COLL

BUTLER, RADFORD NORMAN IM L/RT
1881 WILLIAMS RD. 50 50 53
LEWISVILLE 27023 919 945-5563
BOWMAN GRAY

CHANDLER, EDGAR TED IM AC
741 HIGHLAND AVE. 55 55 58
WINSTON-SALEM 27101 919 727-2097
U OF NC

CLARK, MARGARET ANNE IM AC
250 CHARLOIS BOULEVARD 79 82 84
WINSTON-SALEM 27103 919 768-4730
CASE WESTERN RES

COX, WILLIAM FOSCUE IM /GPM L/RT
3740 KIRKLEES ROAD 42 47 47
WINSTON-SALEM 27104 919 765-2626
MED COLL OF VA

CROUSE, JOHN ROBERT, III IM AC
BOWMAN GRAY SCH. OF MED. 69 69 82
300 S. HAWTHORNE ROAD
WINSTON-SALEM 27103 919 748-2674
DOWNSTATE ME CTR

CRUTCHFIELD, ANDREW JACKSON IM /CD L
2240 CLOVERDALE AVE., STE. 93 42 42 50
WINSTON-SALEM 27103 919 725-5669
U OF VIRGINIA

CULLEN, PETER PATRICK IM AC
250 CHARLOIS BOULEVARD 72 73 78
WINSTON-SALEM 27103 919 768-4730
SUNY-SYRACUSE

DAVIS, EDWARD LANGSTON IM /CD RT
1809 HATTIE CIRCLE 38 38 72
WINSTON-SALEM 27105 919 723-4864
HOWARD U

DAVIS, JOHN PRESTON IM L/RT
329 BANBURY ROAD 34 37 38
WINSTON-SALEM 27104 919 768-5390
U OF PENN

DAY, JAMES WILLIAM IM AC
3310 BROOKVIEW HILLS BLVD.#203 75 76 82
WINSTON-SALEM 27103 919 765-9631
U OF TENNESSEE

DENHAM, JOHN WILLIAM IM /PM AC
250 CHARLOIS BLVD. 66 66 77
WINSTON-SALEM 27103 919 768-4730
BOWMAN GRAY

DOANE, JOHN HORTON, JR. IM /CD AC
250 CHARLOIS BOULEVARD 44 45 77
WINSTON-SALEM 27103 919 768-4730
U OF PENN

DORSETT, FLETCHER I. IM L/RT
2020 HOLLYROOD STREET 41 41 50
WINSTON-SALEM 27107 919 723-5732
MED COLL OF VA

EARLY, IRA G., SR. IM /CD L/RT
3004 BUENA VISTA RD. 50 50 56
WINSTON-SALEM 27106 919 722-6010
BOWMAN GRAY

EASON, PAUL RICHARD IM R
2729 SAWGRASS COURT 88 89 84
WINSTON-SALEM 27103 919 748-2011
U OF NC

EBERLE, ROBERT ADAM IM AC
3310 BROOKVIEW HILLS BLVD.#201 82 84 87
WINSTON-SALEM 27103 919 725-3591
BOWMAN GRAY

FREEDMAN, BARRY IRA IM /NEP AC
300 S. HAWTHORNE RD. 84 87 89
WINSTON-SALEM 27103 919 748-2097
DOWNSTATE ME CTR

FRENCH, WHITNEY JAMES IM AC
3310 BROOKVIEW HILL BLVD. 82 84 88
SUITE 203
WINSTON-SALEM 27103 919 765-9631
DUKE

FROMSON, GERALD ALAN IM AC
250 CHARLOIS BOULEVARD 77 80 81
WINSTON-SALEM 27103 919 768-4730
U OF NC

FUNDERBURK, AMON LEX IM /END AC
250 EXECUTIVE PARK BLVD. 66 66 85
PARK CENTER, SUITE 115
WINSTON-SALEM 27103 919 768-2370
BOWMAN GRAY

GLEN, DULANEY IM AC
250 CHARLOIS BOULEVARD 67 68 80
WINSTON-SALEM 27103 919 768-4730
COLUMBIA U

HARE, HUGH GERALD IM AC
250 CHARLOIS BLVD. 60 65 90
WINSTON-SALEM 27103 919 765-3855
HARVARD

HASHWAY, THOMAS, JR. IM /CD AC
1701 BRIAR LAKE RD. 72 77 89
WINSTON-SALEM 27104 919 768-4730
U OF ROCHESTER

HAZZARD, WM. RUSSELL IM AC
300 S. HAWTHORNE RD. 62 63 87
DEPT. OF MEDICINE
WINSTON-SALEM 27103 919 748-4305
CORNELL U

HEALY, PATRICK K. IM AC
250 CHARLOIS BLVD. 80 81 84
WINSTON-SALEM 27103 919 768-4730
GEORGETOWN U

HELMS, JEFFERSON BIVENS, JR. IM /CD AC
1405 PLAZA DRIVE 62 62 68
WINSTON-SALEM 27103 919 765-4131
BOWMAN GRAY

HEUSER, MARK DAVID IM /GER R
BOX 154, 300 S. HAWTHORNE RD. 84 88 89
WINSTON-SALEM 27103 919 748-2390
U OF FLORIDA

HOUGH, WILLIAM AMOS, III IM AC
410 AVALON ROAD 73 73 76
WINSTON-SALEM 27104 919 768-4730
BOWMAN GRAY

JONES, JAMES MARSHALL, JR. IM AC
1225 E. FIFTH STREET 54 55 76
WINSTON-SALEM 27101 919 725-7362
MEHARRY MED COLL

KLEIN, STEVEN RUSSELL IM /GER AC
3310 BROOKVIEW HILLS BLVD. 74 74 79
SUITE 102
WINSTON-SALEM 27103 919 765-5250
TULANE U

LYKENS, MICHAEL GORDON IM /PUD AC
300 S. HAWTHORNE RD. 82 83 90
WINSTON-SALEM 27103 919 748-4322
OHIO STATE U

LYLES, MARY FENNELL IM /GER AC
300 S. HAWTHORNE ROAD 75 75 80
WINSTON-SALEM 27103 919 748-2051
U OF MISSISSIPPI

MCCALL, CHARLES EMORY IM /ID AC
300 S. HAWTHORNE RD. 61 61 78
WINSTON-SALEM 27103 919 748-4584
BOWMAN GRAY

MCCOMBS, RICK IM R
1517 KENWALT DR. 90 00 90
CLEMMONS 27012
U OF LOUISVILLE

MEADS, MANSON IM L/RT
300 S. HAWTHORNE RD. 43 47 47
WINSTON-SALEM 27103 919 748-4301
TEMPLE U

MYRICK, WILLIAM GLENN IM RT
3115 TURKEY HILL RD. 62 62 66
WINSTON-SALEM 27106 919 765-3806
BOWMAN GRAY

NAPPER, CLAY HUGHES IM AC
2240 CLOVERDALE AVE., #96 56 56 62
WINSTON-SALEM 27103 919 723-0789
BOWMAN GRAY

NEWSOME, ALBERT RAY IM /CD AC
1405 PLAZA DRIVE 61 61 67
WINSTON-SALEM 27103 919 765-4131
U OF NC

PENCE, JILL CERMAK IM AC
3310 BROOKVIEW HILLS BLVD. 84 87 89
SUITE 201
WINSTON-SALEM 27103 919 765-0448
BOWMAN GRAY

PLANTES, PETER JAMES IM AC
250 CHARLOIS BLVD. 82 84 90
WINSTON-SALEM 27103 919 768-4730
U OF PENN

PULLIAM, THOMAS JACKSON IM /GE R
6525 BANBURY RD. 84 85 81
BALTIMORE, MD 21239 301 377-3086
BOWMAN GRAY

REID, CHARLES HAMILTON,JR. IM L/RT
215 PLYMOUTH AVE. 42 45 45
WINSTON-SALEM 27104 919 768-0994
DUKE

ROBIE, PETER WILLIAM IM AC
300 S. HAWTHORNE RD. 76 76 81
WINSTON-SALEM 27103 919 748-2085
BAYLOR

ROCAMORA, LEE RUSSELL IM /GE AC
3310 BROOKVIEW HILLS BLVD. 77 77 82
SUITE 201
WINSTON-SALEM 27103 919 725-3591
U OF NC

SCOBEY, MARTIN WM. IM /GE C
300 S. HAWTHORNE RD. 80 81 90
WINSTON-SALEM 27103 919 748-4612
U OF TENNESSEE

SINTHUSEK, CHIRAPA IM /END AC
1200 TARTAN CT. 70 73 78
WINSTON-SALEM 27106 919 725-4741
CHIENGMAI U

SMITH, NAT ERSKINE IM AC
2900 COUNTRY CLUB ROAD 49 49 77
WINSTON-SALEM 27104 919 748-4524
MED COLL OF GA

SPENCER, WILLIAM JOSEPH IM /CD AC
3310 BROOKVIEW HILLS BLVD.#106 61 62 77
WINSTON-SALEM 27103 919 765-6020
BOWMAN GRAY

STORY, LLOYD JERRELL IM /CD AC
HAWTHORNE MED. PL. #260 61 62 68
1901 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 768-4460
U OF TENNESSEE

SUGG, WILLIAM CUNNINGHAM IM AC
7870 FAIR OAKS DR. 53 53 57
PO BOX 38
CLEMMONS 27012 919 766-6401
JEFFERSON

TABOR, CHARLES GORDON IM /EM AC
1360 PINEBLUFF ROAD 54 54 54
WINSTON-SALEM 27103 919 765-9074
BOWMAN GRAY

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

EGELER, DEBRA RENEE IM /ON AC
250 CHARLOIS BLVD. 84 86 90
WINSTON-SALEM 27103 919 768-4730
MISSOURI U-KC

HOMAS, HAROLD ANDREW, JR. IM /EM C
300 S. HAWTHORNE RD. 76 77 90
WINSTON-SALEM 27103 919 748-4626
U OF MIAMI

RUJILLO, JAIME EMILIO IM /END AC
2928 MAPLEWOOD AVE. #B 72 75 77
WINSTON-SALEM 27103 919 768-0496
U OF ANTIOQUIA

ALK, HENRY LEWIS IM L/RT
2828 CLUB PARK RD. 41 43 48
WINSTON-SALEM 27104
DUKE

ILLEPONTEAUX, REGINALD IM /PUD AC
1728 S. HAWTHORNE RD. 80 83 89
WINSTON-SALEM 27103 919 765-7517
MED U OF SC

VEAVER, FREDERICK BROWN IM AC
1409 PLAZA DRIVE 63 63 72
WINSTON-SALEM 27103 919 765-4301
BOWMAN GRAY

VILLIAMS, SAMUEL CLAY IM L/RT
2637 AUDUBON DR. 45 46 51
WINSTON-SALEM 27106 919 722-8919
U OF PENN

VILLIFORD, PHILLIP MABON IM R
1131 HUNTINGDON RD. 81 82 85
WINSTON-SALEM 27104 919 659-8135
U OF NC

VILSON, HAROLD A., JR. IM /PUD R
1053 MILLER ST. 86 89 90
WINSTON-SALEM 27103 919 748-4325
U OF ALABAMA

VOLFE, JOHN RICHARD IM /RHU AC
3030 LYNDHURST AVE. 67 67 76
WINSTON-SALEM 27103 919 765-1640
MED COLL OF VA

/OUNT, ERNEST HARSHAW, JR. IM L/RT
2800 GREENWICH ROAD 43 48 48
WINSTON-SALEM 27104 919 768-5702
VANDERBILT U

ZARATE, RENATO IM AC
PO BOX 597 69 70 75
WALNUT COVE 27052 919 591-4306
FAR EASTERN U

ATERNAL AND FETAL MEDICINE

NELSON, LEWIS HENRY, III MFM /GYN AC
BOWMAN GRAY, DEPT. OF OBG 70 70 79
WINSTON-SALEM 27103 919 748-4291
BOWMAN GRAY

EUROLOGY

BEY, RICHARD DOUD N AC
160 CHARLOIS BOULEVARD 79 79 84
WINSTON-SALEM 27103 919 768-5834
YALE

CROWELL, GILES FRANKLIN N AC
201 EXECUTIVE PARK BLVD. 79 79 79
WINSTON-SALEM 27103 919 768-6347
BOWMAN GRAY

JANEWAY, RICHARD N AC
300 S. HAWTHORNE RD. 58 63 68
BOWMAN GRAY SCH. OF MED.
WINSTON-SALEM 27103 919 748-4424
U OF PENN

LEFKOWITZ, DAVID S. N AC
2544 HUNTINGTON WOODS DR. 78 78 90
WINSTON-SALEM 27103 919 748-2333
BOWMAN GRAY

MCKINNEY, WILLIAM MARKLEY N AC
BOWMAN GRAY-NEUROLOGY 59 59 70
WINSTON-SALEM 27103 919 748-4494
U OF VIRGINIA

MCLEAN, WILLIAM THADDEUS, JR. N /PD AC
300 S. HAWTHORNE RD. 51 51 67
WINSTON-SALEM 27103 919 748-2316
BOWMAN GRAY

PEARCE, LARRY ALLEN N AC
650 LICHFIELD RD. 61 61 72
WINSTON-SALEM 27104 919 748-4101
BOWMAN GRAY

SMITH, JOHN BALDWIN, III N /CHN AC
160 CHARLOIS BLVD. 69 69 76
WINSTON-SALEM 27103 919 768-5834
MED COLL OF VA

TOOLE, JAMES FRANCIS N /IM AC
300 S. HAWTHORNE RD. 49 62 63
WINSTON-SALEM 27103 919 748-4101
CORNELL U

TROOST, B. TODD N /OPH AC
300 S. HAWTHORNE RD. 63 70 85
DEPT. OF NEUROLOGY
WINSTON-SALEM 27103 919 748-4643
HARVARD

TRUSCOTT, BASIL LIONEL N /IM L/RT
1244 ARBOR RD., #449 50 50 70
WINSTON-SALEM 27104 919 725-4441
YALE

NEPHROLOGY

ADAMS, PATRICIA LEE NEP /IM AC
300 S. HAWTHORNE RD. 74 74 80
WINSTON-SALEM 27103 919 748-4538
BOWMAN GRAY

BUCKALEW, VARDAMAN M. JR. NEP /IM AC
300 S. HAWTHORNE ROAD 58 58 76
WINSTON-SALEM 27103 919 748-2062
U OF PENN

CANZANELLO, VINCENT J. NEP AC
300 S. HAWTHORNE RD. 79 81 88
WINSTON-SALEM 27103 919 748-6191
TUFTS U

DILLEY, JAMES R. NEP AC
3310 BROOKVIEW HILLS BLVD. 74 75 89
SUITE 103
WINSTON-SALEM 27103 919 768-2425
WEST VA U

FELTS, JOHN HARVEY NEP /IM AC
BOWMAN GRAY SCH. OF MED. 49 55 55
WINSTON-SALEM 27103 919 748-4304
MED U OF SC

NUCLEAR MEDICINE

BALL, JAMES DALE NM /R AC
DIV. OF NUCLEAR MEDICINE 69 70 78
WINSTON-SALEM 27103 919 748-3520
NORTHWESTERN U

COWAN, ROBERT JENKINS NM /R AC
2869 FAIRMONT ROAD 63 63 70
WINSTON-SALEM 27106 919 748-4932
U OF NC

MAYNARD, CHARLES DOUGLAS NM AC
BOWMAN GRAY, DEPT. OF RAD. 59 59 63
WINSTON-SALEM 27103 919 748-4575
BOWMAN GRAY

WATSON, NAT ERSKINE, JR. NM /IM AC
766 OAKLAWN AVENUE 66 66 79
WINSTON-SALEM 27104 919 748-3520
MED U OF SC

NEONATAL-PERINATAL MEDICINE

ADCOCK, EUGENE W., III NPM /PD AC
300 S. HAWTHORNE RD. 66 66 90
WINSTON-SALEM 27103 919 748-6860
BOWMAN GRAY

NEUROLOGICAL SURGERY

ALEXANDER, EBEN, JR. NS L
BOWMAN GRAY SCH. OF MED. 39 48 48
WINSTON-SALEM 27103 919 748-4082
HARVARD

BELL, WILLIAM OSGOOD NS AC
BOWMAN GRAY, DEPT. OF NS 77 78 85
WINSTON-SALEM 27103 919 748-4047
HAHNEMANN

BRANCH, CHARLES LEON, JR. NS AC
300 S. HAWTHORNE RD. 81 81 86
BOWMAN GRAY,SECT.NEUROSURGERY
WINSTON-SALEM 27103 919 748-4083
U TX-SOU.WESTERN

BROWN, WILLIAM RAY, JR. NS AC
2825 LYNDHURST AVE. 70 70 80
WINSTON-SALEM 27103 919 765-3750
BOWMAN GRAY

CURLING, OTIS D., JR. NS R
3725 OLYMPIA DR. 84 86 89
WINSTON-SALEM 27104 919 748-2011
U OF VIRGINIA

DAVIS, COURTLAND HARWELL,JR. NS L/RT
2525 WARWICK RD. 44 44 52
WINSTON-SALEM 27104 919 723-7296
U OF VIRGINIA

DE-LA-TORRE, ERNESTO ESTEBAN NS AC
2825 LYNDHURST AVE. 52 61 63
WINSTON-SALEM 27103 919 765-3750
U OF HAVANA

KELLY, DAVID L., JR. NS AC
BOWMAN GRAY-NEUROSURGERY 59 59 65
WINSTON-SALEM 27103 919 748-4049
U OF NC

MCWHORTER, JOE MAURICE NS AC
300 S. HAWTHORNE RD. 68 68 77
WINSTON-SALEM 27103 919 748-4020
U OF MISSISSIPPI

PIKULA, LOUIS, JR. NS AC
2825 LYNDHURST AVE. 61 61 70
WINSTON-SALEM 27103 919 765-3750
BOWMAN GRAY

OBSTETRICS AND GYNECOLOGY

ANDERSON, LYNN BIVINS OBG AC
250 CHARLOIS BLVD. 86 87 90
WINSTON-SALEM 27103
U OF KENTUCKY 919 768-4730

ANDERSON, ROBERT LOUIS OBG AC
301 CENTRAL ROAD 68 68 79
CLEMMONS 27012 919 760-0444
CREIGHTON U

ANDERSON, STEPHEN GRIFFITH OBG AC
2927 LYNDHURST AVENUE 63 63 71
WINSTON-SALEM 27103 919 765-9350
EMORY U

BROWN, THOMAS LAWRENCE OBG AC
145 AFTONSHIRE COURT 77 78 83
WINSTON-SALEM 27104 919 765-2802
BOWMAN GRAY

CLARKE, THOMAS LAWRENCE OBG AC
501 N. CLEVELAND AVENUE 59 59 65
WINSTON-SALEM 27101 919 722-3874
MEHARRY MED COLL

DEATON, JEFFREY LYNN OBG AC
300 S. HAWTHORNE RD. 83 83 91
DEPT. OF OB-GYN
WINSTON-SALEM 27103 919 748-2368
VANDERBILT U

ELLIS, GEORGE JOSEPH, JR. OBG AC
20705 POINTE REGATTA DR. 56 57 82
DAVIDSON 28036 704 892-5480
GEO WASHINGTON U

ERNEST, JOSEPH MCDONALD, III OBG /MFM AC
BOWMAN GRAY, DEPT. OF OBG 78 78 84
WINSTON-SALEM 27103 919 748-4291
U OF MISSISSIPPI

EVANS, CHARLES BRIAN OBG AC
2830-C MAPLEWOOD AVE. 84 87 88
WINSTON-SALEM 27103 919 765-9350
U OF SOU FLORIDA

FAYEZ, JAMIL ABDEL-LATIF OBG /END AC
BOWMAN GRAY SCH. OF MEDICINE 64 64 80
WINSTON-SALEM 27103 919 748-2368
DOW MED COLLEGE

FINN, RICHARD CONNELL OBG AC
250 CHARLOIS BOULEVARD 63 63 76
WINSTON-SALEM 27103 919 768-4730
TULANE U

HARPER, MARGARET A. OBG /NPM AC
300 S. HAWTHORNE RD. 74 74 87
WINSTON-SALEM 27103 919 748-4595
U OF NC

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

HEDRICK, RICHARD ELI, JR. OBG AC
1806 S. HAWTHORNE RD. #102 79 80 84
WINSTON-SALEM 27103 919 768-3632
BOWMAN GRAY

HOPKINS, LAWRENCE DAVID OBG AC
5105 RIVER CHASE RIDGE 77 78 84
WINSTON-SALEM 27104 919 722-9590
BOWMAN GRAY

JENNINGS, JOHN CHRISTOPHER OBG AC
300 S. HAWTHORNE RD. 70 70 89
WINSTON-SALEM 27103 919 748-4595
U OF TENNESSEE

KAMMIRE, LESLIE DANESE OBG AC
2927 LYNDHURST AVE. 86 86 90
WINSTON-SALEM 27103 919 765-9350
BOWMAN GRAY

LENTZ, SAMUEL SMITH OBG /GO AC
300 S. HAWTHORNE RD. 78 79 77
WINSTON-SALEM 27103 919 748-6673
BOWMAN GRAY

LINTON, EUGENE BELL OBG AC
112 BENT ST., BOX 742 51 52 62
BERMUDA RUN 27006 919 765-9350
MED COLL OF VA

LITTLEJOHN, THOMAS WILLARD OBG /OBS AC
3098 TRENWEST DR. #A 47 48 49
WINSTON-SALEM 27103 919 768-0684
U OF TENNESSEE

MCCUNNIFF, DENNIS EDWARD OBG AC
1025 WESSYNGTON ROAD 81 83 86
WINSTON-SALEM 27104 919 768-3632
MED COLL OF GA

MCLAUGHLIN, JAMES CHARLES OBG AC
250 CHARLOIS BOULEVARD 51 52 77
WINSTON-SALEM 27103 919 768-4730
JEFFERSON

MCNEIL, QUINCY ALBERT, JR. OBG AC
2909 MAPLEWOOD AVENUE 69 69 77
WINSTON-SALEM 27103 919 765-2802
BOWMAN GRAY

MEIS, PAUL JEAN OBG /NPM AC
BOWMAN GRAY,DEPT. OF OBG 59 60 78
WINSTON-SALEM 27103 919 748-4039
U OF IOWA

MILLS, MICHAEL KENNETH OBG AC
3402 DONEGAL DR. 82 82 80
CLEMMONS 27012 919 766-8697
BOWMAN GRAY

MUELLER-HEUBACH, EBERHARD OBG/MFM AC
300 S. HAWTHORNE RD. 66 69 90
WINSTON-SALEM 27103 919 748-4594
U OF KOELN

NEWTON, JIMMIE ISAAC OBG AC
3030 TRENWEST DRIVE 64 64 78
WINSTON-SALEM 27103 919 768-4310
U OF NC

PARKER, ROBERT L., JR. OBG AC
2927 LYNDHURST AVE. 82 83 86
WINSTON-SALEM 27103 919 993-4532
BOWMAN GRAY

PITSON, LYNN CHRISTINE OBG AC
250 CHARLOIS BLVD. 85 86 91
WINSTON-SALEM 27103 919 768-4730
U OF TORONTO

PITTAWAY, DONALD EDWARD OBG /REN AC
578 MAIDSTONE LANE 77 77 84
CLEMMONS 27012 919 748-2368
LSU-SHREVEPORT

POLLAK, MICHAEL JOSEPH OBG AC
302 FORSYTH MEDICAL PARK 68 68 74
WINSTON-SALEM 27103
MED COLL OF VA

POLLARD, HAROLD CALLOWAY,III OBG AC
2927 LYNDHURST AVE. 73 73 79
WINSTON-SALEM 27103 919 765-9350
U OF NC

SINGER, LAWRENCE ROBERT OBG AC
250 CHARLOIS BOULEVARD 54 55 79
WINSTON-SALEM 27103 919 768-4730
GEO WASHINGTON U

TAYLOR, BLUCHER EHRINGHAUS OBG AC
2909 LYNDHURST AVENUE 63 63 69
WINSTON-SALEM 27103 919 765-5470
BOWMAN GRAY

WALKER, LAWRENCE CRUMPLER, JR. OBG AC
2927 LYNDHURST AVE. 60 60 69
WINSTON-SALEM 27103 919 765-9350
DUKE

WASHBURN, SCOTT ALAN OBG C
300 S. HAWTHORNE RD. 86 86 91
WINSTON-SALEM 27103 919 748-4595
U OF ARKANSAS

WHITENER, DONALD LEONARD OBG L/RT
3265 STAGHORN RD. 46 50 51
WINSTON-SALEM 27104 919 765-9350
JOHNS HOPKINS

ZAMMIT, ROBERT PAUL OBG AC
406 FORSYTH MEDICAL PARK 56 67 67
WINSTON-SALEM 27103 919 765-4533
CREIGHTON U

OCCUPATIONAL MEDICINE

FLETCHER, ROBERT GEORGE OM /FP AC
401 N. MAIN STREET 63 63 83
WINSTON-SALEM 27102 919 741-3024
OHIO STATE U

HARRINGTON, LEE, JR. OM /IM L/RT
2340 OLIVET CHURCH ROAD 44 49 52
WINSTON-SALEM 27106 919 924-4179
TEMPLE U

HAYES, DONALD MICHAEL OM /IM AC
SARA LEE CORP. 54 54 56
PO BOX 2760
WINSTON-SALEM 27102 919 744-3708
BOWMAN GRAY

ONCOLOGY

CAPIZZI, ROBERT LAWRENCE ON /HEM AC
300 S. HAWTHORNE RD. 64 66 78
WINSTON-SALEM 27103 919 748-4464
HAHNEMANN

COOPER, MILES ROBERT ON /HEM AC
300 S. HAWTHORNE ROAD 62 62 75
WINSTON-SALEM 27103 919 748-4300
BOWMAN GRAY

CRUZ, JULIA MARGARITA ON AC
300 S. HAWTHORNE RD. 78 81 86
WINSTON-SALEM 27103 919 748-2075
U OF FLORIDA

EVANS, LISA SMITH ON AC
3333 SILAS CREEK PARKWAY 84 89 90
WINSTON-SALEM 27103 919 760-5095
U OF SOU FLORIDA

GROTE, THOMAS H. ON /IM AC
3314 HEALY DR., STE. 107 81 87 88
WINSTON-SALEM 27103 919 768-2521
DUKE

MCCUNNIFF, ANN JONES ON /TR AC
1025 WESSYNGTON RD. 81 83 86
WINSTON-SALEM 27104 919 748-4981
MED COLL OF GA

MUSS, HYMAN BERNARD ON /HEM AC
BOWMAN GRAY, DEPT. OF MED. 68 70 75
WINSTON-SALEM 27103 919 748-4397
DOWNSTATE ME CTR

PASCHOLD, EUGENE H. ON /IM AC
3314 HEALY DR. STE. 107 78 79 85
WINSTON-SALEM 27103 919 768-2521
BOWMAN GRAY

POWELL, BAYARD LOWERY ON /HEM AC
300 S. HAWTHORNE RD. 80 80 78
WINSTON-SALEM 27103 919 748-2946
U OF NC

RANDALL, MARCUS EDDIE ON /TR AC
300 S. HAWTHORNE RD. 82 83 82
DIV. RADIATION ONCOLOGY
WINSTON-SALEM 27103 919 748-4981
U OF NC

RICHARDS, FREDERICK, II ON /HEM AC
300 S. HAWTHORNE RD. 64 64 74
WINSTON-SALEM 27103 919 748-4337
MED U OF SC

SLATKOFF, MARC LESTER ON /HEM AC
2825 LYNDHURST AVE., STE. 103 74 74 86
WINSTON-SALEM 27103 919 768-0325
U OF FLORIDA

SPURR, CHARLES LEWIS ON /HEM L/RT
1845 BEUNA VISTA RD. 40 41 57
WINSTON-SALEM 27104 919 777-3036
U OF ROCHESTER

STERCHI, JOHN MICHAEL ON /GS AC
300 S. HAWTHORNE RD. 66 66 79
WINSTON-SALEM 27103 919 748-4276
U OF CINCINNATI

WHITE, DOUGLAS RECTOR ON /HEM AC
BOWMAN GRAY, DEPT. OF MED. 67 74 75
WINSTON-SALEM 27103 919 748-4380
U OF CHICAGO

ZEKAN, PATRICIA JOAN ON /IM AC
250 CHARLOIS BLVD. 78 78 84
WINSTON-SALEM 27103 919 768-4730
WEST VA U

OPHTHALMOLOGY

BRANCH, JAMES DAVID OPH AC
224 TOWN RUN LANE 73 74 77
WINSTON-SALEM 27101 919 723-0748
HOWARD U

BRUENING, FREDERICK L. OPH AC
3746 VEST MILL RD. 80 80 88
WINSTON-SALEM 27103 919 765-6900
U OF IOWA

CAMPBELL, CHARLES BRUCE, III OPH AC
2827 LYNDHURST AVE.,STE. 204 76 78 82
WINSTON-SALEM 27103 919 768-0725
U OF VIRGINIA

CASHWELL, LEON FRANKLIN, JR. OPH AC
300 S. HAWTHORNE ROAD 72 72 82
WINSTON-SALEM 27103 919 748-4091
U OF NC

GOTTLIEB, LOUIS NATHAN OPH AC
631 COLISEUM DRIVE 62 62 69
WINSTON-SALEM 27106 919 723-1041
BOWMAN GRAY

GREVEN, CRAIG MICHAEL OPH AC
4234 ALLISTAR RD. 83 83 83
WINSTON-SALEM 27104 919 748-4091
BOWMAN GRAY

HELSABECK, BELMONT AUGUSTUS OPH L/RT
631 COLISEUM DRIVE 31 31 36
WINSTON-SALEM 27106 919 723-1041
MED COLL OF VA

JOHNSON, HOLLY PUGH OPH R
416 RIDGEHAVEN DR. 86 86 87
WINSTON-SALEM 27104 919 748-3504
JEFFERSON

MARION, JEREMIAH RICHARD, III OPH AC
631 COLISEUM DR. 73 75 83
WINSTON-SALEM 27106 919 723-1041
DUKE

MCKINLEY, PHILIP HOWARD OPH AC
3111 MAPLEWOOD AVENUE 72 76 82
WINSTON-SALEM 27103 919 768-3240
TULANE U

REED, JOHN WILLIAM OPH AC
BOWMAN GRAY, DEPT. OF OPH 62 62 71
WINSTON-SALEM 27103 919 748-4091
BOWMAN GRAY

SLUSHER, M. MADISON OPH AC
300 S. HAWTHORNE RD. 64 65 74
BOWMAN GRAY SCH. OF MED.
WINSTON-SALEM 27103 919 748-4091
U OF KENTUCKY

TARA, CHARLES SAMUEL OPH AC
1702 S. HAWTHORNE ROAD 69 69 77
WINSTON-SALEM 27103 919 768-4140
U OF VERMONT

YEATTS, ROBERT P. OPH /PSF AC
300 S. HAWTHORNE RD. 78 78 88
DEPT. OF OPH.
WINSTON-SALEM 27103 919 748-4091
BOWMAN GRAY

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

RTHOPEDIC SURGERY

BECAN, ARTHUR FRANK ORS AC
74 76 90
PO BOX 686
OUTPATIENT CENTER
KING 27021 919 983-9617
RUTGERS MED SCH

BITTINGER, ISABEL ORS L
36 39 48
118 S. CHERRY ST.,
PO BOX 10668
WINSTON-SALEM 27108 919 725-0656
JOHNS HOPKINS

BOSTIC, WILLIAM CHIVOUS, III ORS AC
SALEM ORTHOPAEDIC ASSOC. PA 59 59 65
PO BOX 25007
WINSTON-SALEM 27114 919 768-1270
HARVARD

CREGAN, GREGG EDWARD ORS /HS AC
BOX 25007 78 78 85
1425 PLAZA DR.
WINSTON-SALEM 27114 919 768-1270
JEFFERSON

CURL, WALTON WRIGHT ORS AC
300 S. HAWTHORNE RD. 74 75 88
WINSTON-SALEM 27103 919 748-4207
DUKE

GRISTINA, ANTHONY GEORGE ORS AC
2190 FOX MILL RD. 56 56 72
HERNDON, VA 22071 919 748-3952
ALBANY MED COLL

HAYES, JOHN TERRENCE ORS AC
1342 WESTGATE CENTER DR. 51 66 66
WINSTON-SALEM 27103 919 768-3595
U OF MICHIGAN

HOLMES, GEORGE WASHINGTON ORS L/RT
4235 STONEHENGE LN. 31 31 33
WINSTON-SALEM 27106 919 722-6939
MED COLL OF VA

HOLTHUSEN, GREGORY GRANT ORS AC
SALEM ORTHOPAEDIC ASSOC. PA 65 65 73
PO BOX 25007
WINSTON-SALEM 27114 919 768-1270
U OF WISCONSIN

JENNINGS, JEROME EDWIN ORS AC
410 FORSYTH MEDICAL PK 69 70 75
WINSTON-SALEM 27103 919 765-1571
MED COLL OF GA

KING, MICHAEL EUSTERMAN ORS AC
3111 MAPLEWOOD AVE. STE. 104 77 77 83
WINSTON-SALEM 27103 919 768-4110
U OF NC

KOMAN, L. ANDREW ORS /HS AC
300 S. HAWTHORNE RD. 74 74 82
WINSTON-SALEM 27103 919 748-2878
DUKE

KORNEGAY, ALONZO DIXON ORS AC
PO BOX 25007 74 74 80
WINSTON-SALEM 27114 919 760-0436
MED U OF SC

LOWE, STEPHEN BECHTLER ORS /HS AC
SALEM ORTHOPAEDIC ASSOC. PA 76 76 77
PO BOX 25007
WINSTON-SALEM 27114 919 768-1270
U OF NC

MARTIN, DAVID FRANKLIN ORS AC
300 S. HAWTHORNE RD. 82 80 90
WINSTON-SALEM 27103 919 748-4207
JOHNS HOPKINS

NICASTRO, JOSEPH FRANCIS ORS AC
300 S. HAWTHORNE RD. 69 73 77
WINSTON-SALEM 27103 919 748-3947
M C OF WISCONSIN

POEHLING, GARY GEORGE ORS /HS AC
BOWMAN GRAY, DEPT. OF ORS 68 76 77
WINSTON-SALEM 27103 919 748-3948
M C OF WISCONSIN

POLLOCK, FRANK EDWARD ORS AC
300 S. HAWTHORNE RD. 54 54 60
BOWMAN GRAY SCH. OF MED.
WINSTON-SALEM 27103 919 768-1270
OHIO STATE U

RITCHIE, JOHN EDWARD ORS AC
1425 PLAZA DR., BOX 25007 80 85 90
WINSTON-SALEM 27103 919 768-1270
SUNY-SYRACUSE

ROSE, RICHARD PHILLIP ORS AC
FORSYTH MEDICAL PARK, STE. 504 64 64 75
WINSTON-SALEM 27103 919 768-9500
BOWMAN GRAY

SPANGLER, THOMAS CLAYTON ORS C
2925 BRIGHAM ST. 84 89 84
WINSTON-SALEM 27103 919 765-9314
U OF NC

TAFT, CHARLES VAN ORS AC
1425 PLAZA DR., BOX 25007 68 68 77
WINSTON-SALEM 27114 919 768-1270
DUKE

TOMBERLIN, KENNETH GUY ORS AC
2925 BRIGHAM STREET 60 60 69
WINSTON-SALEM 27103 919 765-9314
BOWMAN GRAY

WARD, WILLIAM GOODE ORS R
3378 SALLY KIRK RD. 78 80 84
WINSTON-SALEM 27106 919 659-2661
DUKE

WEBB, LAWRENCE XAVIER ORS /TRS AC
300 S. HAWTHORNE RD. 78 78 85
WINSTON-SALEM 27103 919 748-3606
TEMPLE U

OTOLARYNGOLOGY

ALSUP, ROBERT MARTIN OTO AC
175 CHARLOIS BLVD., STE. 101 74 77 80
WINSTON-SALEM 27103 919 768-3361
U OF NC

ALSUP, WILLIAM BYRN, JR. OTO L/RT
261 WESTVIEW DR. SW 40 40 49
WINSTON-SALEM 27104 919 724-0487
MED COLL OF GA

BOGARD, ANN QUINN OTO AC
1901 S.HAWTHORNE RD.,STE. 240 74 75 80
WINSTON-SALEM 27103 919 768-1308
M C OF WISCONSIN

BROWNE, JAMES DALE OTO AC
300 S. HAWTHORNE RD. 82 83 89
WINSTON-SALEM 27103 919 748-4161
MED COLL OF GA

DYER, JEFFREY JAMES OTO S
211-21 DALEWOOD DR. 92 89
WINSTON-SALEM 27104 919 659-8455
BOWMAN GRAY

FISHER, WILLIAM SLOAN, III OTO AC
175 CHARLOIS BLVD. STE. 101 74 74 78
WINSTON-SALEM 27103 919 768-3361
DUKE

JORDAN, ROBERT CHARLES OTO AC
175 CHARLOIS BLVD. STE. 101 80 00 89
WINSTON-SALEM 27103
MED U OF SC

KEYES, KENNETH SHOCKLEY OTO /HNS AC
1420 PLAZA DRIVE 66 66 75
WINSTON-SALEM 27103 919 765-4922
U OF OREGON

KOHUT, ROBERT IRWIN OTO /HNS AC
300 S. HAWTHORNE RD. 60 61 79
WINSTON-SALEM 27103 919 748-4161
U OF CHICAGO

MARTIN, JAMES CICERO, JR. OTO AC
1420 PLAZA DR. 82 82 85
WINSTON-SALEM 27103 919 765-4922
LA STATE U

MATTHEWS, BRIAN LEWIS OTO AC
DEPT. OF OTOLARYNGOLOGY 80 82 86
N. C. BAPTIST HOSPITAL
WINSTON-SALEM 27103 919 748-4161
BOWMAN GRAY

MAY, JOHN SCOTT OTO AC
300 S. HAWTHORNE RD. 82 83 89
WINSTON-SALEM 27103 919 748-4161
BOWMAN GRAY

MCGUIRT, WILLIAM FREDERICK OTO /ON AC
300 S. HAWTHORNE RD. 68 68 77
WINSTON-SALEM 27103 919 748-4161
BOWMAN GRAY

MOUNTJOY, JOHN ROBERT OTO AC
1420 PLAZA DRIVE 66 67 75
WINSTON-SALEM 27103 919 765-4922
GEO WASHINGTON U

PITSER, WILLIAM ROSS OTO AC
1420 PLAZA DRIVE 62 62 70
WINSTON SALEM N C 27103 919 765-4922
U OF NC

SATTERWHITE, WILLIAM M. OTO /HNS AC
1420 PLAZA DRIVE 58 58 65
WINSTON-SALEM 27103 919 765-4922
DUKE

SHEALY, RONALD BERNARD OTO AC
175 CHARLOIS BLVD., STE. 101 75 76 81
WINSTON-SALEM 27103 919 768-3361
MED U OF SC

THOMPSON, JAMES NICHOLAS OTO /PSF AC
BOWMAN GRAY-SURGERY 71 71 80
WINSTON-SALEM 27103 919 748-4161
OHIO STATE U

WARD, WALTER AVEREL, JR. OTO /A AC
1411-B PLAZA WEST RD. 61 61 76
WINSTON-SALEM 27103 919 760-0240
BOWMAN GRAY

PSYCHIATRY

ANDREW, RAYMOND HALL P AC
250 CHARLOIS BLVD. 70 71 84
WINSTON-SALEM 27103 919 768-4730
U OF ILLINOIS

BAHRANI, KHOSROW H. P AC
3111 MAPLEWOOD AVE., STE. 101 62 73 74
WINSTON-SALEM 27103 919 768-2162
U OF TEHRAN

BRANHAM, HENRY EZELL, JR. P /HYP AC
1409 PLAZA WEST RD., STE. E 57 57 82
WINSTON-SALEM 27103 919 768-9393
MED U OF SC

BRUNSTETTER, RICHARD W. P AC
300 S. HAWTHORNE RD. 55 56 89
WINSTON-SALEM 27103 919 748-6236
COLUMBIA U

BURGESS, GLENN NORMAN P AC
2422-B REYNOLDA RD. 57 57 75
WINSTON-SALEM 27106 919 722-5022
U OF W ONTARIO

CARLTON, WILLIAM YARBOROUGH P AC
1115 ENGLEWOOD DR. 80 82 82
WINSTON-SALEM 27106 919 722-9939
BOWMAN GRAY

CLIFTON, PHILLIP MAX P /CHP AC
SALEM PSYCHIATRIC ASSOC. 70 70 89
190 CHARLOIS BLVD.
WINSTON-SALEM 27103 919 768-6930
U OF VIRGINIA

COLLINS, WILLIAM STUART P AC
3969 QUILLING ROAD 60 60 68
WINSTON-SALEM 27104 919 765-7350
DUKE

DANSIE, KIM DUNCAN P R
1783 POLO ROAD 87 89 90
WINSTON-SALEM 27106 919 768-2430
BOWMAN GRAY

DEKLE, LARRY CARLTON P /PD AC
250 CHARLOIS BLVD. 68 68 77
WINSTON-SALEM 27103 919 725-7777
EMORY U

DENTON, WAYNE HOLT P AC
300 S. HAWTHORNE RD. 82 84 90
WINSTON-SALEM 27103 919 748-6993
U OF CHICAGO

EASON, MARGIE BEAZLEY P R
2729 SAWGRASS COURT 88 99 84
WINSTON-SALEM 27103 919 748-2011
U OF NC

GABY, NANCY SUE P AC
3000 BETHESDA PL., STE. 101 78 80 86
WINSTON-SALEM 27103 919 765-9750
BOWMAN GRAY

GIBSON, ROBERT WYLIE P /N AC
190 CHARLOIS BOULEVARD 68 68 74
WINSTON-SALEM 27103 919 768-6930
BOWMAN GRAY

GOODE, DAVID JOHN P AC
BOWMAN GRAY, DEPT. OF PSY. 66 66 78
WINSTON-SALEM 27103 919 748-4142
BOWMAN GRAY

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

GRANT, WILLIS JACKSON, III — P AC 54 54 63
250 CHARLOIS BLVD.
WINSTON-SALEM 27103 919 768-4730
U OF NC

GULLEY, MARCUS MARCELLUS — P AC 51 55 56
300 S. HAWTHORNE RD.
DEPT. OF PSYCHIATRY
WINSTON-SALEM 27103 919 748-4554
BOWMAN GRAY

IBRAHIM, MOUNIR LABIB — P /HYP AC 72 80 80
1400 MILLGATE DR. STE. A
WINSTON-SALEM 27103 919 768-2886
CAIRO U

ISRAEL, JAMES RAY — P AC 63 63 66
1365 WESTGATE CENTER DR.
SUITE N-1
WINSTON-SALEM 27103 919 760-3220
BOWMAN GRAY

JARRAHI, ALI — P /PH AC 62 62 73
2830 MAPLEWOOD AVENUE
WINSTON-SALEM 27103 919 768-2424
U OF TEHRAN

KRAMER, STEPHEN IRWIN — P /NP AC 78 79 83
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-3920
JEFFERSON

MATTOX, JAMES DWIGHT, JR. — P AC 69 69 76
2990 BETHESDA PL. STE. 605-B
WINSTON-SALEM 27104 919 768-8281
BOWMAN GRAY

MCCAULEY, ROGER LEE — P AC 70 70 76
190 CHARLOIS BOULEVARD
WINSTON-SALEM 27103 919 768-6930
WEST VA U

PETERS, DONALD W. — P AC 82 84 88
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-3693
U OF NC

PHAN, THAI TIEN — P /PYM AC 72 72 83
1321 ASHLEYBROOK LN.
WINSTON-SALEM 27103 919 659-9045
U OF HUE

PROCTOR, RICHARD CULPEPPER — P L/RT 45 47 48
1244 ARBOR RD., #211
WINSTON-SALEM 27104 919 723-6020
BOWMAN GRAY

RAU, BRUCE WILLIAM — P AC 72 74 79
2990 BETHESDA PL. STE. 605-B
WINSTON-SALEM 27103 919 768-8281
U OF MISSOURI

REIFLER, BURTON V. — P /GER AC 69 70 87
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-4552
EMORY U

RICHARDSON, CAROL WARNER — P AC 82 84
P.O. BOX 2955
WINSTON-SALEM 27102
EAST CAROLINA U.

ROGERS, JACK MARRELL — P /N AC 58 58 64
BOWMAN GRAY, DEPT. OF PSY.
WINSTON-SALEM 27103 919 748-3617
BOWMAN GRAY

SHEPARD, CLAUDIA PRICHARD — P R 89 90 85
792 ROSLYN RD.
WINSTON-SALEM 27104 919 748-3605
BOWMAN GRAY

SHERRILL, KIMBERLY ANN — P AC 80 85 89
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-6028
U OF TEXAS

SPENCER, RICHARD LEWIS — P AC 60 60 69
3309-A HEALY DRIVE
WINSTON-SALEM 27103 919 765-6525
MED COLL OF VA

WEAVER, EDWARD HARRISON — P AC 74 75 81
190 CHARLOIS BLVD.
WINSTON-SALEM 27103 919 768-6930
U OF ALABAMA

WILLIAMS, BARRY NEIL — P AC 83 85 88
3000 BETHESDA PL., STE. 801
WINSTON-SALEM 27103 919 659-9141
BOWMAN GRAY

WOLTZ, LUCY H. — P R 89 89 88
420 MAGNOLIA BRANCH DR. #8
WINSTON-SALEM 27104 919 765-4139
BOWMAN GRAY

PEDIATRICS

BENNETT, JERRY L. — PD AC 67 67 88
2240 CLOVERDALE AVENUE
SUITE 217, PROF. BLDG.
WINSTON-SALEM 27103 919 722-7143
BOWMAN GRAY

BLOUNT, FREDERICK ALEXANDER — PD L/RT 43 44 49
2390 COLISEUM DRIVE
WINSTON-SALEM 27106 919 724-3072
U OF PENN

BOWEN, EDWYN TAYLOR, JR — PD AC 55 61 61
3001 MAPLEWOOD AVENUE
WINSTON-SALEM 27103 919 765-9170
EMORY U

BUNEMANN, LEE M. — PD R 88 00 88
1590-H WOODS RD.
WINSTON-SALEM 27106 919 722-2953
WAYNE STATE U

CHAMBERS, ROBERT TILLMAN — PD AC 58 58 60
2786 ROBINHOOD RD.
WINSTON-SALEM 27106 919 765-5242
DUKE

CONRAD, ELIZABETH — PD L/RT 43 46 46
1862 RUNNYMEADE RD.
WINSTON-SALEM 27104 919 723-1213
JOHNS HOPKINS

EARNHARDT, JAMES FREDERICK — PD AC 64 64 70
3318 HEALY DRIVE
WINSTON-SALEM 27103 919 765-8490
U OF NC

FINKLEA, LEE KILPATRICK — PD AC 79 79 85
250 CHARLOIS BLVD.
WINSTON-SALEM 27103 919 768-4730
MED U OF SC

FORD, ROBERT VIRGIL, JR. — PD AC 71 71 74
3175 MAPLEWOOD AVENUE
WINSTON-SALEM 27103 919 768-7030
BOWMAN GRAY

HINMAN, ALANSON — PD /N L/RT 46 47 52
1244 ARBOR RD. #426
WINSTON-SALEM 27104 919 723-0458
JOHNS HOPKINS

JOHNSON, HENRY WESLEY — PD AC 56 56 59
3175 MAPLEWOOD AVENUE
WINSTON-SALEM 27103 919 768-7030
BOWMAN GRAY

KENNEDY, CHARLIE LEE — PD AC 63 64 67
501 N. CLEVELAND AVE.
WINSTON-SALEM 27101 919 725-0514
MEHARRY MED COLL

LAWLESS, MICHAEL RHODES — PD AC 68 68 78
DEPT. OF PEDIATRICS
BOWMAN GRAY SCH. OF MED.
WINSTON-SALEM 27103 919 727-8108
U OF TEXAS

MACK, RONALD BRIAN — PD AC 54 55 82
2516 WOODBERRY DRIVE
WINSTON-SALEM 27106 919 727-8108
LOYOLA U

MYRACLE, JOHN HOBART — PD /PDC AC 74 75 79
250 CHARLOIS BOULEVARD
WINSTON-SALEM 27103 919 768-4730
U OF OKLAHOMA

PARSLEY, BETSY ALLEN — PD AC 69 69 73
3420 THORESBY COURT
WINSTON-SALEM 27104 919 768-6830
BOWMAN GRAY

PERRY, DAVID RUSSELL, JR. — PD AC 46 47 53
3175 MAPLEWOOD AVENUE
WINSTON-SALEM 27103 919 768-7030
BOWMAN GRAY

RACKLEY, JAMES WAYNE — PD AC 55 55 77
250 CHARLOIS BLVD.
WINSTON-SALEM 27103 919 768-4730
U OF TENNESSEE

RICE, DAVID GRAYBEAL — PD AC 85 87 90
3175 MAPLEWOOD AVE.
WINSTON-SALEM 27103 919 768-7030
BOWMAN GRAY

ROGERS, JAMES MICHAEL — PD AC 71 71 78
1355 WESTGATE CENTER DR.
WINSTON-SALEM 27103 919 765-8490
BOWMAN GRAY

SAYERS, WILLIAM FLOYD — PD AC 65 65 73
3318 HEALY DRIVE
WINSTON-SALEM 27103 919 765-8490
U OF NC

SIMON, JIMMY L. — PD AC 55 56 80
BOWMAN GRAY, DEPT. OF PED.
WINSTON-SALEM 27103 919 748-4431
U OF CALIFORNIA

SIMPSON, EUGENE MYERS, JR. — PD AC 73 73 77
250 CHARLOIS BOULEVARD
WINSTON-SALEM 27103 919 768-4730
BOWMAN GRAY

STAMEY, CHARLES CLAUD — PD AC 53 53 57
3000 BETHESDA PL. #501
WINSTON-SALEM 27103 919 768-6830
HARVARD

STONE, PERRY GALE — PD AC 76 76 84
DALTON ROAD, P. O. BOX 426
KING 27021 919 983-2531
BOWMAN GRAY

TATE, DAVID HARRISON — PD AC 65 65 69
3175 MAPLEWOOD AVENUE
WINSTON-SALEM 27103 919 768-7030
BOWMAN GRAY

TROWELL, AMY REBECCA — PD /PHO AC 72 72 78
250 CHARLOIS BOULEVARD
WINSTON-SALEM 27103 919 768-4730
MED COLL OF GA

WALKER, GEORGE KIRK — PD AC 85 87 84
3318 HEALY DR.
WINSTON-SALEM 27103 919 765-8490
BOWMAN GRAY

WEAVER, R. GREY, JR. — PD AC 77 77 84
771 REAFORD ROAD
WINSTON-SALEM 27104 919 748-4091
BOWMAN GRAY

WILLIAMS, ROBERT LEE — PD AC 75 76 80
2004 CLAXTON DRIVE
WINSTON-SALEM 27107 919 785-0037
DUKE

WOOTEN, JOHN DAVID, III — PD /CHN R 84 85 89
BOX 504, 300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-2317
BOWMAN GRAY

PEDIATRIC CARDIOLOGY

PEDIATRIC RADIOLOGY

SUMNER, THOMAS EDWARD — PDR /PD AC 68 68 77
BOWMAN GRAY, DEPT. OF RAD.
WINSTON-SALEM 27103 919 748-4316
U OF ROCHESTER

PEDIATRIC SURGERY

CHWALS, WALTER J. — PDS AC 80 80 88
278 WEST VIEW DR.
WINSTON-SALEM 27104 919 748-4502
KRAKOW-POLAND

SHAFFNER, LOUIS DES — PDS /GS L/RT 41 47 51
740 N. PINE VALLEY ROAD
WINSTON-SALEM 27106 919 725-1503
HARVARD

TURNER, CHARLES SIEWERS — PDS AC 70 70 75
2819 FOREST DRIVE
WINSTON-SALEM 27104 919 724-0345
BOWMAN GRAY

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

UBLIC HEALTH

YERMAN, MELVIN FREDERIC PH L/RT
1244 ARBOR ROAD, 444 35 35 62
WINSTON-SALEM 27104 919 723-7420
OHIO STATE U

EDIATRIC HEMATOLOGY-ONCOLOGY

ATTERSON, RICHARD BRUCE PHO /PD AC
300 S. HAWTHORNE RD. 55 55 61
WINSTON-SALEM 27103 919 748-4085
BOWMAN GRAY

HYSICAL MEDICINE AND REHABILITATION

ILLARD, PATRICK L. PM AC
3333 SILAS CREEK PKWY. 66 66 88
WINSTON-SALEM 27103 919 760-5763
U OF CINCINNATI

LASTIC SURGERY

RGENTA, LOUIS C. PS AC
300 S. HAWTHORNE RD. 69 69 88
WINSTON-SALEM 27103 919 748-4416
U OF MICHIGAN

EASON, EDWARD STEWART PS AC
1732 S. HAWTHORNE ROAD 63 64 73
WINSTON-SALEM 27103 919 765-3540
U OF ALABAMA

EFRANZO, ANTHONY JOHN PS AC
300 S. HAWTHORNE RD. 73 81 82
WINSTON-SALEM 27103 919 748-4500
GEO WASHINGTON U

AGG, JOHN ANDERSON PS AC
2901 MAPLEWOOD AVENUE 71 71 77
WINSTON-SALEM 27103 919 765-8620
BOWMAN GRAY

WYN, PAUL PERKINS, JR. PS /GS AC
2901 MAPLEWOOD AVENUE 61 61 70
WINSTON-SALEM 27103 919 765-8620
COLUMBIA U

OWELL, JULIUS PS /OTO L
1900 S. HAWTHORNE RD. STE. 480 43 43 52
WINSTON-SALEM 27103 919 760-1727
U OF PENN

ARKS, MALCOLM W. PS AC
300 S. HAWTHORNE RD. 75 75 88
WINSTON-SALEM 27103 919 748-4172
LA STATE U

HEARIN, JACOB CONNELL PS /GS AC
1900 S. HAWTHORNE RD. 68 70 79
208 FORSYTH MEDICAL PARK
WINSTON-SALEM 27103 919 760-4783
U OF PENN

TEWART, RONALD CLEVELAND PS /HS AC
2901 MAPLEWOOD AVENUE 74 75 82
WINSTON-SALEM 27103 919 765-8620
BOWMAN GRAY

UCKER, SCOTT L. PS /HS AC
175 CHARLOIS BLVD., STE 102 82 83 88
WINSTON-SALEM 27103 919 760-1727
U OF MISSOURI

VRIGHT, JOHN HERMAN PS /GS AC
STE. 774, FORSYTH MEDICAL PK. 68 68 75
1900 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 765-8620
U OF NC

ATHOLOGY, ANATOMICAL AND CLINICAL

USS, DAVID HUMPHREY PTH /HEM AC
237 GRANDVIEW DRIVE 66 66 81
WINSTON-SALEM 27104 919 748-2641
BOWMAN GRAY

HALLA, VENKATA RAMANA PTH /NA AC
200 FLINTSHIRE ROAD 69 75 79
WINSTON-SALEM 27104 919 768-0591
S V MEDICAL COLL

COLLETT, BOBBIE ANN, PHD PTH R
3740-A MOSS DR. 90 90 90
WINSTON-SALEM 27106 919 748-2649
INDIANA U

DUDLEY, JOSEPH BOYLES PTH AC
3333 SILAS CREEK PARKWAY 57 61 65
WINSTON-SALEM 27103 919 760-5840
U OF PENN

EGGERS, GERALD WOOD PTH AC
3333 SILAS CREEK PKWY. 78 78 89
DEPT. OF PATHOLOGY
WINSTON-SALEM 27103 919 760-5840
U OF SOU ALA

FOUSHEE, J. HENRY SMITH, JR. PTH AC
718 FORSYTH MEDICAL PARK 47 47 55
WINSTON-SALEM 27103 919 768-2351
JEFFERSON

HOLLEMAN, IVAN LACY, JR. PTH AC
BOWMAN GRAY, DEPT. OF PATH. 53 53 78
WINSTON-SALEM 27103 919 748-4311
BOWMAN GRAY

HOPKINS, MARBRY BENJAMIN, III PTH /BLB AC
300 S. HAWTHORNE RD. 77 81 83
WINSTON-SALEM 27103 919 748-2624
U OF VIRGINIA

JONES, THADDEUS LEROY PTH /HEM AC
3333 SILAS CREEK PARKWAY 67 67 74
WINSTON-SALEM 27103 919 760-5840
U OF VIRGINIA

LIDE, THOMAS NORWOOD PTH L/RT
10 SOVEREIGN DRIVE 38 47 47
HILTON HEAD ISLAND, SC 29928 803 681-6815
DUKE

MARSHALL, RICHARD BLAIR PTH AC
236 STANAFORD ROAD 55 57 80
WINSTON-SALEM 27104 919 748-2626
BOSTON U

MCCOOL, JAMES ALVIS PTH AC
3333 SILAS CREEK PARKWAY 64 64 79
WINSTON-SALEM 27103 919 760-5840
BOWMAN GRAY

MEYERS, JAMES HOWARD PTH AC
2540 EMPIRE DR. 72 74 82
WINSTON-SALEM 27103 919 760-4620
WASHINGTON U

MILLER, LARRY ROBERT PTH AC
300 S. HAWTHORNE RD. 83 86 88
DEPT. OF PATHOLOGY
WINSTON-SALEM 27103 919 748-2637
BAYLOR

MOREHEAD, ROBERT PAGE PTH L/RT
1051 ARBOR ROAD 36 36 38
WINSTON-SALEM 27104 919 722-2879
JEFFERSON

O'CONNOR, MICHAEL LEE PTH AC
BOWMAN GRAY, DEPT. OF PATH. 64 65 76
WINSTON-SALEM 27103 919 748-4311
U OF KANSAS

OLYMPIO, GEORGIA K. PTH AC
RT. #2, BOX 197 82 84 85
CONOVER 28613 919 768-5217
U OF FLORIDA

POOL, ROBERT SMITHWICK PTH /CLP AC
FORSYTH MEMORIAL HOSPITAL 55 55 67
WINSTON-SALEM 27103 919 760-5840
BOWMAN GRAY

PRICHARD, ELIZABETH HYDE PTH R
300 S. HAWTHORNE RD. 86 88 88
DEPT. OF PATHOLOGY
WINSTON-SALEM 27103 919 748-4311
UNIV. OF S.C.

PRICHARD, ROBERT WILLIAMS PTH AC
300 S. HAWTHORNE RD. 47 51 51
WINSTON-SALEM 27103 919 748-2649
GEO WASHINGTON U

RUSSELL, WILSON GLOVER PTH AC
FORSYTH MEM HOSP-PTH 74 75 81
WINSTON-SALEM 27103 919 773-3840
VANDERBILT U

SCHILLER, HERBERT MILES PTH /CLP AC
2570 EMPIRE DR. 68 68 78
WINSTON-SALEM 27103 919 760-4620
BOWMAN GRAY

TEOT, LISA ANNE PTH R
1049 MADISON AVE. 86 89 89
WINSTON-SALEM 27103 919 748-4311
GEO WASHINGTON U

VANCE, RICHARD PHIL PTH C
300 S. HAWTHORNE RD. 81 84 90
WINSTON-SALEM 27103 919 748-3970
BOWMAN GRAY

WEBER, GLENDA H. PTH AC
P. O. BOX 809 65 65 70
CLEMMONS 27012 919 768-7680
BOWMAN GRAY

WOODRUFF, RALPH DUTTON PTH AC
BOWMAN GRAY, DEPT. OF PATH. 65 68 83
WINSTON-SALEM 27103 919 748-4311
JEFFERSON

PULMONARY DISEASES

ALFORD, PETER T. PUD /IM AC
300 S. HAWTHORNE RD. 79 00 87
WINSTON-SALEM 27103
U OF MISSISSIPPI

BOWTON, DAVID LOWELL PUD /CC AC
DEPT. OF MEDICINE 75 76 81
BOWMAN GRAY SCH. OF MEDICINE
WINSTON-SALEM 27103 919 748-4332
U OF ILLINOIS

COLLINS, DAVID DUTROW PUD /CC AC
3001 LYNDHURST AVE. 75 77 84
WINSTON-SALEM 27103 919 765-0888
DUKE

GALLUP, KENNETH RAYNOR, JR. PUD /CC AC
3001 LYNDHURST AVE. 73 73 78
WINSTON-SALEM 27103 919 765-0888
BOWMAN GRAY

HINSON, THOMAS R., JR. PUD /IM AC
3001 LYNDHURST AVE. 79 80 88
WINSTON-SALEM 27103 919 765-0383
U OF NC

HURST, DANIEL JOHNSON PUD /IM AC
250 CHARLOIS BLVD. 67 69 84
WINSTON-SALEM 27103 919 768-4730
U OF CHICAGO

PERRY, IRVIN SAMUEL PUD /IM AC
3001 LYNDHURST AVE. 55 55 76
WINSTON-SALEM 27103 919 765-0383
MED COLL OF VA

SIGAL, BARRY WM. PUD /IM AC
3001 LYNDHURST AVE. 82 83 87
WINSTON-SALEM 27103 919 765-0383
MED COLL OF GA

STRINGER, LLEWELLYN WINN PUD AC
1728 S. HAWTHORNE ROAD 66 66 74
WINSTON-SALEM 27103 919 765-7517
MED COLL OF VA

RADIOLOGY

ADAMS, HARLEY STEWART R L/RT
2710 ST. CLAIRE ROAD 42 50 50
WINSTON-SALEM 27106 919 768-3555
CASE WESTERN RES

BAKER, ALFRED LECARPENTIER R C
3155 MAPLEWOOD AVE. 79 80 90
WINSTON-SALEM 27103
BOWMAN GRAY

BUTLER, JAMES HILTON R AC
3155 MAPLEWOOD AVENUE 60 64 68
WINSTON-SALEM 27103 919 765-2702
U OF MISSISSIPPI

D'SOUZA, VINCENT J. R AC
300 S. HAWTHORNE RD. 71 74 87
WINSTON-SALEM 27103 919 748-4435
BANGALORE MED CO

GELFAND, DAVID WILLIAM R AC
853 BUTTONWOOD DRIVE 62 63 76
WINSTON-SALEM 27104 919 748-2481
YALE

GORDON, JOSEPH GROVER R L/RT
1801 HATTIE CIRCLE 48 49 57
WINSTON-SALEM 27105 919 748-4316
MEHARRY MED COLL

34. FORSYTH-STOKES-DAVIE COMPONENT SOCIETY (Continued)

GREEN, ROBERT LORENZA R AC 59 59 66
3155 MAPLEWOOD AVENUE
WINSTON-SALEM 27103 919 760-8381
U OF NC

LINK, KERRY MICHAEL R AC 82 83 85
300 S. HAWTHORNE RD.
DEPT. OF RADIOLOGY
WINSTON-SALEM 27103 919 748-6890
U OF ROCHESTER

MARTIN, JAMES FRANKLIN R /DR L 42 50 51
2680-3 GROSVENOR PLACE
WINSTON-SALEM 27106 919 723-5199
CASE WESTERN RES

POPE, THOMAS LEE, JR. R AC 78 78 76
300 S. HAWTHORNE RD.
DEPT. OF RADIOLOGY
WINSTON-SALEM 27103 919 748-4316
U OF NC

REED, JAMES CROFT R AC 68 75 80
300 S. HAWTHORNE RD.
DEPT. OF RADIOLOGY
WINSTON-SALEM 27103
U OF MIAMI

ROSSITCH, JOHN CARLOS R R 88 89 90
2772 LONDON LANE
WINSTON-SALEM 27103 919 748-2471
DUKE

SMITH, CLAUDE ALFRED R AC 53 53 66
3155 MAPLEWOOD AVENUE
WINSTON-SALEM 27103 919 765-2702
JEFFERSON

VARNELL, ROBERT MARTIN R C 83 85 90
3155 MAPLEWOOD AVE.
WINSTON-SALEM 27103 919 765-2702
U OF TENNESSEE

ZAGORIA, RONALD JAY R AC 83 84 85
300 S. HAWTHORNE RD.
DEPT. OF RADIOLOGY
WINSTON-SALEM 27103 919 748-4316
U OF MARYLAND

RHEUMATOLOGY

ROBERTS, JESSE EARLE RHU /IM AC 61 61 73
1903 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 659-1012
LA STATE U

RADIATION ONCOLOGY

GREVEN, KATHRYN MCCONNELL RO AC 83 85 83
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-4981
BOWMAN GRAY

OLDS, WARREN WOODSON RO AC 78 79 90
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-4981
U OF VIRGINIA

THERAPEUTIC RADIOLOGY

FERREE, CAROLYN RUTH BLACK TR AC 70 71 76
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-4981
BOWMAN GRAY

HARR, DEBRA M. B. TR AC 84 86 87
719 WESTVIEW DR.
WINSTON-SALEM 27103 704 322-0856
BOWMAN GRAY

RABEN, MILTON TR AC 59 59 71
N. C. BAPTIST HOSPITAL
WINSTON-SALEM 27103 919 748-4981
TUFTS U

SURGERY, TRAUMATIC

MEREDITH, JAY WAYNE TRS /TS AC 78 79 81
BOWMAN GRAY, DEPT. OF SURG
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-2011
BOWMAN GRAY

THORACIC SURGERY

JOHNSTON, FRANK RANDOLPH TS /CDS L/RT 42 50 50
735 ARBOR RD.
WINSTON-SALEM 27104 919 748-4338
DUKE

KON, NEAL DAVID TS AC 79 80 90
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-4338
U OF FLORIDA

UROLOGICAL SURGERY

ASSIMOS, DEAN GEORGE U AC 77 78 86
BOWMAN GRAY SCH. OF MEDICINE
WINSTON-SALEM 27103 919 748-4131
LOYOLA U

BOYCE, WILLIAM HENRY U L/RT 44 52 52
RT. #2, BOX 150
STUART, VA 24171
VANDERBILT U

CARLSON, KENNETH PAUL U AC 55 65 65
2932 LYNDHURST AVE.
WINSTON-SALEM 27103 919 765-4021
EMORY U

CURRIE, DONALD PATRICK U AC 66 66 74
PO BOX 24369
WINSTON-SALEM 27114 919 768-0735
DUKE

DAVIS, WAYNE EDWARD U AC 49 51 54
504 FORSYTH MEDICAL PARK
WINSTON-SALEM 27103 919 765-4882
DUKE

GRIFFIN, ANDREW S. U AC 83 84 8
5116 CARVERSHAM CT.
WINSTON-SALEM 27106 919 765-402
BOWMAN GRAY

HARRISON, LLOYD HERRITAGE U AC 62 62 6
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-413
BOWMAN GRAY

HART, OLIVER JAMES, III U AC 84 89 8
278 FLINTSHIRE RD.
WINSTON-SALEM 27104 919 768-073
BOWMAN GRAY

HART, OLIVER JAMES, JR. U AC 59 59 6
1806 S. HAWTHORNE ROAD
WINSTON-SALEM 27103 919 768-073
U OF NC

HART, OLIVER JAMES, SR. U L/RT 25 30 3
1930 GEORGIA AVENUE
WINSTON-SALEM 27104 919 722-659
MED U OF SC

HOWELL, FREDERICK LAWRENCE U AC 68 68 7
2932 LYNDHURST AVENUE
WINSTON-SALEM 27103 919 765-402
U OF VIRGINIA

JAROW, JONATHAN P. U AC 80 83 8
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-413
NORTHWESTERN U

KROOVAND, ROY LAWRENCE U /PD AC 68 68 8
300 S. HAWTHORNE RD.
WINSTON-SALEM 27103 919 748-413
U OF CINCINNATI

MCCULLOUGH, DAVID LEGARDE U AC 64 64 8
BOWMAN GRAY, DEPT. OF URO.
WINSTON-SALEM 27103 919 748-413
BOWMAN GRAY

MONTGOMERY, WILLIAM GARDNER U AC 52 52 5
2932 LYNDHURST AVE.
WINSTON-SALEM 27103 919 765-402
BOWMAN GRAY

NORFLEET, CHARLES MILLNER, JR. U L/RT 37 37 4
1244 ARBOR RD. #199
WINSTON-SALEM 27104 919 722-146
U OF PENN

REID, CHARLES FREDRIC U AC 74 75 7
1806 S. HAWTHORNE RD.
PO BOX 24369
WINSTON-SALEM 27114 919 768-073
U OF NC

SHOWN, THOMAS EARL U AC 61 61 7
2932 LYNDHURST AVENUE
WINSTON-SALEM 27103 919 765-402
U OF LOUISVILLE

STUBBS, ALLSTON JULIUS U AC 67 67 7
2932 LYNDHURST AVE.
WINSTON-SALEM 27103 919 765-402
DUKE

35. FRANKLIN COMPONENT SOCIETY

OFFICERS—**President:** Carey J. Perry, M.D., 113 Jolly St., Louisburg 27549 (919 496-4250)
Secretary: Darron Molter, M.D., 98 Bullock St., Franklinton 27525 (919 494-1000)

FAMILY PRACTICE

MOLTER, DARRON JOSEPH FP AC 87 88 90
98 BULLOCK ST.
FRANKLINTON 27525 919 494-1000
MED SCH-UMDNJ

PERRY, CAREY JONES FP AC 56 56 62
113 JOLLY STREET
LOUISBURG 27549 919 496-4250
U OF NC

STOVER, PHILLIP E. FP AC 80 81 86
519 BICKETT BLVD.
LOUISBURG 27549 919 496-5774
EASTERN VA

WHELESS, THOMAS O. FP /GER L/RT 43 43 47
106 JOHN ST.
LOUISBURG 27549 919 496-3566
BOWMAN GRAY

GENERAL PRACTICE

MEDDERS, JAMES DOYLE GP /CD AC 56 56 62
113 JOLLY STREET
LOUISBURG 27549 919 496-4250
U OF NC

STALLINGS, STEPHEN D., JR. GP L/RT 46 47 50
ROUTE #2, BOX 109
ZEBULON 27597 919 269-8802
BOWMAN GRAY

GENERAL SURGERY

PERDUE, JASPER BURT, JR. GS AC 64 64 71
111 JOLLY STREET
LOUISBURG 27549 919 496-4177
BOWMAN GRAY

INFECTIOUS DISEASES

INGRAM, ROBERT GREGORY IM 81 81
BUNN MEDICAL CENTER
PO BOX 368
BUNN 27509 919 496-65
U OF VIRGINIA

OBSTETRICS AND GYNECOLOGY

NOLEN, JACK RICHARD OBG A 55 56
PO BOX 1566
GADSDEN, AL 35902 205 442-31
U OF ALABAMA

36. GASTON COMPONENT SOCIETY

)FFICERS—**President:** G. W. Arney, M.D., PO Box 1747, Gastonia 28054 (704 866-2948)
Secretary: Jon Pauli, M.D., 1896 Remount Rd., Gastonia 28054 (704 867-0735)
Executive Secretary: Debi Ward, PO Box 1747, Gastonia 28053 (704 866-2260)

LERGY & IMMUNOLOGY

OBERTS, RICHARD SCOTT AI /PD AC 78 80 83
1050 X-RAY DRIVE, SUITE A
GASTONIA 28054 704 861-0515
COLUMBIA U

ESTHESIOLOGY

OTTER, DANIEL T. AN AC 83 83 88
2122 SHANNON DR.
GASTONIA 28054 704 866-2825
U OF KENTUCKY

INGFIELD, THOMAS WHETSELL AN AC 65 73 77
3705 EAGLEBROOK DR.
GASTONIA 28054 704 864-2499
U OF MARYLAND

ARBOROUGH, JESSE GRAHAM, JR. AN AC 78 78 85
RT. 1, BOX 125
CATAWBA COVE RD.
BELMONT 28012
U OF NC

RDIOVASCULAR DISEASES

IGBY, RONALD WYMAN CD /IM AC 71 72 77
1896 REMOUNT ROAD
GASTONIA 28054 704 867-0735
MED COLL OF GA

HOMASON, HENRY CLAYTON, JR. CD /IM AC 67 67 74
1021 X-RAY DR.
GASTONIA 28054 704 867-2341
U OF NC

RMATOLOGY

AHN, ROBERT HOWARD D AC 72 73 76
1072 X-RAY DR.
PO BOX 3598
GASTONIA 28053 704 864-8386
NEW YORK U

EATHLEY, FRANKLIN BURR D /A L 46 50 50
224 NEW HOPE ROAD
GASTONIA 28052 704 867-0773
U OF TENNESSEE

AGNOSTIC RADIOLOGY

RNEY, GERALD WAYNE DR AC 74 75 82
1381 E. GARRISON BLVD.
PO BOX 1495
GASTONIA 28053 704 864-4378
U OF TENNESSEE

ODERSTROM, LAWRENCE PAUL DR /NM AC 80 81 80
148 BERRY MOUNTAIN RD.
CRAMERTON 28032 704 864-4378
BOWMAN GRAY

ARGAS, CARLOS ABRAHAM DR AC 63 75 76
P. O. BOX 1495
GASTONIA 28052 704 864-4378
U OF ST. ANDRES

ERGENCY MEDICINE

RANDON, DANIEL EM AC 65 65 70
3028 MT. VERNON DRIVE
GASTONIA 28056 704 827-0253
BOWMAN GRAY

MILY PRACTICE

GNER, MARSHAL EDWARD FP AC 52 54 54
609 E. ACADEMY ST.
PO BOX 159
CHERRYVILLE 28021 704 435-6058
DUKE

AIZCORBE, RAUL CESAR FP AC 52 64 65
79 MCADENVILLE ROAD
BELMONT 28012 704 825-3101
U OF HAVANA

BAAGIL, HASAN MOHAMAD FP AC 61 77 88
1315 E. GARRISON BOULEVARD
GASTONIA 28054 704 866-0101
AIRLANGA U

BOLIN, LEWIS BRYANT, JR. FP AC 82 84 86
603 COX RD.
GASTONIA 28054 704 865-2386
BOWMAN GRAY

CASE, MICHAEL STEPHEN FP C 86 86 90
212 GLENWAY BLVD.
BELMONT 27810 919 825-5333
LA STATE U

ECKBERT, WILLIAM FOX FP L 39 41 42
P. O. BOX 309
CRAMERTON 28032 704 824-1321
DUKE

FORRESTER, JAMES SUMMERS FP /GPM AC 62 62 63
P. O. BOX 459
STANLEY 28164 704 263-4716
BOWMAN GRAY

HORSLEY, WILLIAM NOLEN FP L 41 46 47
PO BOX 725
BELMONT 28012 704 825-5376
DUKE

MCDOWELL, ROY HENDRIX FP L/RT 29 29 31
1199 HAYES DR.
BROOKRIDGE APT. 521
WINSTON-SALEM 27106 704 825-8546
U OF MARYLAND

MILLER, ANDREW CLEVELAND, III FP AC 55 55 60
311 W. THIRD AVENUE
GASTONIA 28052 704 865-4231
U OF NC

MURPHY, MAUREEN E. FP AC 85 86 88
421 E. CATAWBA ST.
BELMONT 28012 704 825-4750
U OF KANSAS

RANKIN, RICHARD EUGENE FP /GP AC 50 50 52
RANKIN CLINIC
MOUNT HOLLY 28120 704 827-3031
U OF VIRGINIA

RINEHART, DAVID APGAR FP AC 82 82 86
212 GLENWAY ST.
BELMONT 28012 704 825-5333
U OF VIRGINIA

SCOTT, JACKSON VANCE FP /IM AC 59 62 66
101 W. CATAWBA AVENUE
MOUNT HOLLY 28120 704 827-3014
JEFFERSON

STREETER, CHARLES TRUMAN FP L/RT 45 55 56
222 WOODRIDGE DR.
BELMONT 28012 704 825-4426
U OF NEBRASKA

WALLACE, ROBERT BRUCE FP /EM AC 76 77 80
25 E. WOODROW AVE.
BELMONT 28012 704 825-5376
DALHOUSIE U

WEATHERS, BAILEY GRAHAM, JR. FP AC 60 61 61
222 S. MAIN STREET
STANLEY 28164 704 263-8945
MED COLL OF VA

WILLIS, H.S.K., JR. FP /AM AC 52 52 76
125 W. CENTRAL AVE.
MOUNT HOLLY 28120 704 827-5876
DUKE

FACIAL PLASTIC SURGERY, OTO

HUTCHINS, CHARLES HUBERT FPS /OTO AC 66 66 75
750 COX ROAD
GASTONIA 28054 704 867-7212
MED COLL OF GA

GASTROENTEROLOGY

DRAKE, SAMUEL THOMAS GE /IM AC 73 75 79
603 COX ROAD
GASTONIA 28054 704 867-3585
MED U OF SC

GENERAL PRACTICE

BARRO, LEE DENNIS GP AC 76 76 83
119-B W. PENNSYLVANIA AVE.
BESSEMER CITY 28016 704 629-4186
DALHOUSIE U

BRADLEY, GEORGE LEE, JR. GP /AM AC 68 69 83
800 E. FIRST STREET
CHERRYVILLE 28021 704 435-4111
PHIL OSTEO MC

CAIN, FRANK CORAL, JR. GP AC 53 54 55
224 NEW HOPE ROAD
GASTONIA 28052 704 865-8241
DUKE

DAVIS, RUFUS JACKSON GP L/RT 46 46 51
32 LAKE DR.
BELMONT 28012 704 825-8266
MED U OF SC

HOUSER, FOREST MELVILLE GP L/RT 28 28 30
410 S. ELM STREET
CHERRYVILLE 28021 704 435-6803
U OF PENN

WILL, THOMAS AUGUSTINE GP L/RT 48 49 53
307 WORTH ST.
DALLAS 28034 704 922-3106
BOWMAN GRAY

GENERAL SURGERY

BOND, JOHN PENNINGTON GS L/RT 40 40 48
1806 FAIRFIELD DRIVE
GASTONIA 28054 704 865-0154
MED COLL OF GA

COUTURE, MARK MOSCOE GS /TS AC 74 74 79
902 COX RD. STE. G
GASTONIA 28054 704 864-6011
MCGILL U

LEVY, ALAN MERRILL GS /VS AC 82 83 88
1089 X-RAY DR.
GASTONIA 28054 704 864-8377
MED COLL OF GA

LIGHT, ANDREW IRA GS AC 83 85 89
1089 X-RAY DR.
GASTONIA 28054 704 864-8377
TULANE U

MILES, JOHN RALPH, JR. GS /VS AC 73 74 80
211 S. CHESTNUT ST.
GASTONIA 28054 704 867-8975
U OF VIRGINIA

MOSKOWITZ, MARK SANDERS GS /VS AC 74 80 80
1089 X-RAY DR.
GASTONIA 28054 704 864-8377
BOSTON U

RICE, EDMOND LEE GS H 31 32 43
UNITED CHRISTIAN HOSPITAL
LAHORE, WEST PAKISTAN 00000
EMORY U

SCHMITTER, KARL JOSEPH GS /HNS AC 78 81 85
902 COX RD., STE. C
GASTONIA 28054 704 864-7821
OHIO STATE U

SICILIA, CARLOS ALEJANDRO GS /VS AC 82 89 90
902 COX RD., STE. G
GASTONIA 28054 704 864-7821

THOMAS, HENRY FULLER GS /VS AC 66 66 75
902-G COX ROAD
GASTONIA 28054 704 864-7821
U OF NC

36. GASTON COMPONENT SOCIETY (Continued)

TYNER, HUGH EDWARD GS /TS L/RT
2562 PINEWOOD RD. 46 46 54
GASTONIA 28054 704 864-7821
BOWMAN GRAY

WILLIAMS, ERNEST COUNCIL GS /TS L/RT
3618 CLUB COLONY DR., W. 51 56 56
GASTONIA 28056 704 864-1417
TULANE U

GYNECOLOGY

BREEDEN, THOMAS E. GYN AC
1391-C GARRISON BLVD. 60 60 72
GASTONIA 28054 704 867-3551
MED U OF SC

CALDWELL, JESSE BURGOYNE, JR. GYN L/RT
1307 PARK LANE 41 41 50
GASTONIA 28052 704 865-0968
MCGILL U

CONNER, JOEL DEWITT GYN AC
571 COX RD. 57 58 63
GASTONIA 28054 704 865-0033
U OF NC

LUPSE, RAYMOND MORRIS GYN AC
603 COX ROAD 77 82 89
GASTONIA 28054 704 866-0111
CASE WESTERN RES

OGDEN, ROBERT HARVEY GYN AC
1032 X-RAY DR. 63 69 70
GASTONIA 28054 704 867-6348
MED COLL OF GA

SEEAR, TORBEN GYN L/RT
938 PARAMOUNT CIRCLE 41 54 54
GASTONIA 28052 704 864-7935
U OF COPENHAGEN

INTERNAL MEDICINE

AIKEN, JANET CYBRYNSKI IM AC
1377-A E. GARRISON BLVD. 76 78 80
GASTONIA 28054 704 861-0210
U OF NC

AIKEN, WARWICK, III IM AC
1377-A E. GARRISON BLVD. 76 78 73
GASTONIA 28054 704 861-0210
U OF NC

ALBRIGHT, BENJAMIN PHILLIPS,JR IM AC
1896 REMOUNT ROAD 65 65 71
GASTONIA 28054 704 867-0735
EMORY U

ANTHONY, LUTHER LESLIE, JR. IM /CD AC
1896 REMOUNT ROAD 53 53 54
GASTONIA 28054 704 867-0736
JEFFERSON

AYCOCK, PERRY WILLIAM, JR. IM /GE AC
1896 REMOUNT ROAD 68 68 74
GASTONIA 28054 704 867-0735
MED U OF SC

BARRINGER, ROBERT PHILLIPS IM AC
1896 REMOUNT ROAD 66 66 74
GASTONIA 28054 704 867-0730
U OF NC

BOYCE, OREN DOUGLAS IM /HYP L
328 HUFFMAN RD. 33 35 46
GASTONIA 28054 704 865-1653
DUKE

DICKSON, BRICE TEMPELTON, JR. IM L/RT
837 ATHENIAN DR. 44 44 50
GASTONIA 28052 704 867-7656
JEFFERSON

GOLDBERG, DAVID S. IM /OM AC
1361-E E. GARRISON BLVD. 82 82 88
GASTONIA 28054 704 864-2630
HAHNEMANN

LEEPER, WILLIAM EDWARD, JR. IM L/RT
2525 PINEWOOD RD. 43 44 52
GASTONIA 28054 704 865-5153
DUKE

LUVIS, L.D.A. CLAUDIUS IM AC
1018 HEATHERLOCH DR. 71 71 83
GASTONIA 28054 704 867-1306
U OF CEYLON

MURPHY, THOMAS LYNCH, JR. IM /PUD AC
1021 X-RAY DR. 73 76 82
GASTONIA 28054 704 867-2341
HARVARD

PATEL, NATU V. IM AC
635 COX RD., STE. E 71 73 88
GASTONIA 28054 704 864-9887
GUJARAT U

PAULI, JON WARREN IM AC
1896 REMOUNT RD. 84 84 87
GASTONIA 28054 704 867-0735
U OF LOUISVILLE

SHASTRY, CHANDRASHEKARA IM /END AC
607 E. GARRISON BLVD. 70 71 83
GASTONIA 28054 704 866-4607
KARNATAK U

WAGGONER, LONNIE AUSTINE, JR. IM L/RT
2522 SHEFFIELD DR. 48 53 54
GASTONIA 28054 704 865-5486
DUKE

WEERAKOON, RANJIT IM /PUD AC
101 CAROLINA COUNTRY PLAZA 67 67 89
DALLAS 28034 704 922-3106

NUCLEAR MEDICINE

JARVIS, JAMES LUTHER NM /R L/RT
1516 PINEOLA LANE 46 46 52
GASTONIA 28054 704 865-8679
BOWMAN GRAY

NEUROLOGICAL SURGERY

SIVA, SIVALINGAM NS AC
900 COX ROAD 65 76 78
GASTONIA 28054 704 865-7655
U OF SINGAPORE

SWEET, RAYMOND C. NS AC
226 WILMOT DR. 73 76 89
GASTONIA 28054 704 864-1187
MED COLL OF VA

OBSTETRICS AND GYNECOLOGY

BONNIN, IRVIN RAYMOND OBG AC
1225 E. GARRISON BLVD. 64 64 74
GASTONIA 28054 704 867-7226
LA STATE U

GLENN, DOROTHY NORMAN OBG L
6005 MIDNIGHT PASS RD. 38 38 40
SARASOTA, FL 34242 704 865-1103
MED COLL OF PENN

HEMBREE, EUGENE EDWARD, JR. OBG AC
1225 E. GARRISON BLVD. 66 66 73
GASTONIA 28054 704 865-7417
MED U OF SC

HOLMAN, JOSEPH R. OBG AC
1225 E. GARRISON BLVD. 84 84 89
GASTONIA 28054 704 866-7226
U OF LOUISVILLE

HOWE, DONALD DOUGLAS OBG AC
1225 E. GARRISON BLVD. 70 71 77
GASTONIA 28054 704 865-7416
U OF NC

JACOBS, GEORGE DANIEL OBG AC
1225 E. GARRISON BLVD. 76 76 82
GASTONIA 28054 704 865-7416
U OF NC

LESTER, ROBERT HILTON OBG AC
1225 E. GARRISON BLVD. 75 76 80
GASTONIA 28054 704 867-6386
U OF NC

MASON, GARY MERLIN OBG AC
112 W. PLUM ST. 82 86 86
MOS-1-1-91
NORFOLK, VA 23510 804 640-0096
CASE WESTERN RES

PEACH, CHARLES ARTHUR OBG AC
1225 E. GARRISON BLVD. 78 79 83
GASTONIA 28054 704 867-6386
MED COLL OF GA

WEEKS, JOHN WESLEY OBG AC
2575 PEMBROKE RD. 65 65 8
GASTONIA 28054 704 864-88
DUKE

ONCOLOGY

LEGRAND, SUSAN B. ON /IM AC
1050 X-RAY DR. STE. B 83 85 8
GASTONIA 28054 704 861-14
UNIV. OF S.C.

OPHTHALMOLOGY

AKERS, RICHARD EDWIN OPH AC
631 COX ROAD 70 72 7
GASTONIA 28054 704 864-77
MED U OF SC

EAVES, RUPERT SPENCER, JR. OPH AC
631 COX RD. 60 60 6
GASTONIA 28054 704 864-77
U OF NC

ORTHOPEDIC SURGERY

BLAKE, ROBERT ADAMS ORS AC
902-D COX ROAD 65 65 7
GASTONIA 28054 704 864-672
MED U OF SC

DOLS, KENNETH JOHN ORS AC
902 COX RD., STE. D 82 82 8
GASTONIA 28054 704 864-672
U OF ILLINOIS

JARMAN, WILLIAM HENRY, JR. ORS AC
902 COX RD., STE. A 67 67 7
GASTONIA 28054 704 865-648
U OF NC

KING, GLENDALL LEE ORS AC
902 COX ROAD, SUITE A 55 65 6
GASTONIA 28054 704 865-648
WASHINGTON U

MILLER, GEORGE ROLFE ORS L/R
1040 PARAMOUNT CIR. 43 50 5
GASTONIA 28052 704 865-648
U OF ROCHESTER

NIEMEYER, CHARLES JOHN ORS AC
902 COX ROAD, SUITE A 66 66 7
GASTONIA 28054 704 865-648
DUKE

SANDERS, JAMES ALLEN ORS AC
902 COX RD. 63 63 6
GASTONIA 28052 704 867-233
BOWMAN GRAY

WHITESIDES, EDWARD STEELE ORS AC
902 COX ROAD, SUITE D 51 52 5
GASTONIA 28054 704 864-672
DUKE

OTOLARYNGOLOGY

FEUER, ABE LAWRENCE OTO L/R
1006 FAIRFIELD DR. 39 39 4
GASTONIA 28054 704 864-222
HAHNEMANN

SILVOY, EDWARD JOHN OTO /PS AC
1010 X-RAY DR. 71 72 7
GASTONIA 28054 704 865-767
NEW YORK MED COL

PSYCHIATRY

DALLAM, DEBORAH LYNN P AC
1371 E. GARRISON BLVD., STE. B 82 82 9
GASTONIA 28054 704 853-007
MEHARRY MED COLL

DEAS, DAVID JOHN P AC
239 WILMOT DR. 61 61 6
GASTONIA 28054 704 867-233
DUKE

36. GASTON COMPONENT SOCIETY (Continued)

ALONEY, EUGENE DOUGLAS P /EM AC
1249 HOFFMAN RD. 62 63 66
GASTONIA 28054 704 866-0042
DUKE

ILLAI, JEY P AC
238-3 WILMOT DR. #239 78 78 85
GASTONIA 28054 704 867-2338
KARNATAK UNIV.

USTROM, EINAR P /CHP AC
239 WILMONT ROAD 58 58 79
GASTONIA 28054 704 867-2338
BOWMAN GRAY

DIATRICS

BERNETHY, WILLIAM BORDEN, JR. PD AC
610 DEERWOOD 60 60 66
GASTONIA 28052 704 864-4298
U OF NC

HAMBERS, ROBERT EDWARD PD AC
1839 E. GARRISON BOULEVARD 52 56 56
GASTONIA 28054 704 864-2685
DUKE

OX, RUSSELL JACKSON PD AC
902 COX RD. STE. C 79 79 82
GASTONIA 28052 704 864-6522
U TX-SAN ANTONIO

ISHER, CARL ELLIS PD AC
902-C COX ROAD 69 69 76
GASTONIA 28054 704 867-5356
U OF NC

AYES, WILLIAM CLAYTON, JR. PD AC
825 MAJESTIC CT., STE. B 74 76 85
GASTONIA 28054 704 864-5437
U OF NC

AHSER, CHARLES IRVING PD L/RT
548 BRIDLEPATH TRAIL 46 46 52
GASTONIA 28054 704 865-5025
BOWMAN GRAY

ORCROSS, FREDERICK CLEVELAND PD AC
1839 E. GARRISON BOULEVARD 64 64 71
GASTONIA 28054 704 864-2685
GEO WASHINGTON U

RINCE, GEORGE EDWARD PD /PH AC
3709 ST. REGIS DR. 44 47 48
GASTONIA 28054 704 853-5290
DUKE

WATTS, JOHN COMER, III PD AC
1839 E. GARRISON BLVD. 84 84 90
GASTONIA 28054 704 864-2685
TULANE U

PLASTIC SURGERY

VOCI, VINCENT EUGENE PS /HS AC
902 COX RD., STE. B 74 75 85
GASTONIA 28054 704 867-5852
U OF LOUISVILLE

PATHOLOGY, ANATOMICAL AND CLINICAL

LEONE, CHERYL LEVINE PTH /NM AC
1740 MONTCLAIR AVENUE 69 70 78
GASTONIA 28054 704 866-2851
TULANE U

LEONE, PHILIP GEORGE PTH /DMP AC
1740 MONTCLAIR AVENUE 68 68 78
GASTONIA 28054 704 866-2851
TULANE U

TRACY, STEVEN LYNN PTH AC
DEPT. OF PATHOLOGY 80 81 89
GASTON MEMORIAL HOSPITAL
GASTONIA 28052 704 866-2851
U OF IOWA

WITTENBERG, PETER HERBERT PTH AC
GASTON MEM. HOSP. 64 65 78
PO BOX 1747
GASTONIA 28053 704 866-2851
U OF COLORADO

PULMONARY DISEASES

SHERRILL, WILLIAM C., JR. PUD /IM AC
1896 REMOUNT RD. 79 79 86
GASTONIA 28054 704 867-0735
U OF FLORIDA

RADIOLOGY

ALLAN, JAMES THOMAS, JR. R AC
309 MAYWORTH WAY 70 70 76
CRAMERTON 28032 704 824-7333
U OF PENN

GIBBS, STUART WYNN R L/RT
2647 ARMSTRONG CIR. 44 44 48
GASTONIA 28054 704 865-5883
BOWMAN GRAY

JORDAN, RICHARD M. R AC
PO BOX 1495 83 84 87
GASTONIA 28053 704 864-4378
BOWMAN GRAY

MINTZ, ROBERT DAVID R AC
PO BOX 1495 85 88 90
GASTON RADIOLOGY, PA
GASTONIA 28054 704 864-4378
U OF NY-ST BROOK

MORRIS, LESLIE MORGAN R L/RT
3636 BRENTWOOD DR. 43 43 48
GASTONIA 58056 704 865-4430
BOWMAN GRAY

RADIATION ONCOLOGY

GRIFFETH, JACK THURMAN RO AC
421-D S. SHARON AMITY RD. 83 83 90
CHARLOTTE 28211 704 866-2938
MED COLL OF GA

THORACIC SURGERY

PERKINS, ROBERT SANBORN TS /GS AC
3406 COUNTRY CLUB DR. 60 62 84
GASTONIA 28056 704 864-8377
TUFTS U

UROLOGICAL SURGERY

FREEMAN, PERCY LEE U L/RT
5245 MALLARD PT. ROAD 43 47 47
LAKE WYLIE, SC 21704 803 831-8598
MED COLL OF GA

GARRETT, JOHN BOSTIAN, JR. U AC
631 COX ROAD 73 74 82
GASTONIA 28054 704 864-7764
MED U OF SC

TAYLOR, JAMES EDWARD U AC
631 COX ROAD 77 77 83
GASTONIA 28052 704 867-4896
MED COLL OF GA

WARLICK, JOHN THOMAS, III U AC
631 COX ROAD 66 66 72
GASTONIA 28052 704 864-7764
MED U OF SC

WHITE, GROVER WATTS U AC
631 COX ROAD 56 64 64
GASTONIA 28054 704 864-7764
U OF ALABAMA

39. GRANVILLE COMPONENT SOCIETY

OFFICERS—**President:** Richard L. Taylor, M.D., 1018 College St., Oxford 27565 (919 693-3972)
Secretary: Stephen D. Ertischek, M.D., 1032 College St., Oxford 27565 (919 693-6541)

HILD PSYCHIATRY

SCHMITT, RAYMOND FRANCIS, JR. CHP /P AC
JOHN UMSTEAD HOSP. 59 59 70
ADOLESCENT UNIT, C.P.I.
BUTNER 27509 919 575-7906
LA STATE U

AMILY PRACTICE

ANDERSON, JOHN B., JR. FP AC
1018 COLLEGE STREET 80 81 84
OXFORD 27565 919 693-3972
U OF CINCINNATI

COLSON, JOSEPH SAMPSON FP L/RT
PO BOX 459 51 51 65
OXFORD 27565 919 693-2697
HOWARD U

DANIEL, LOUIE SAMUEL FP L/RT
124 PINE CONE DRIVE 40 40 46
OXFORD 27565 919 693-6735
U OF MARYLAND

DAY, EUGENE DAVIS, JR. FP AC
104 NEW COLLEGE ST. 81 81 91
OXFORD 27565 919 693-8126
EAST CAROLINA U

MANGUM, RICHARD ARNOLD FP AC
PO BOX 706 64 64 66
CREEDMOOR 27522 919 528-0707
U OF NC

TARRY, WILLIAM BURWELL, JR. FP L/RT
104 NEW COLLEGE STREET 53 54 54
OXFORD 27565 919 693-8126
MED COLL OF VA

TAYLOR, RICHARD LEWIS FP AC
1018 COLLEGE STREET 62 62 66
OXFORD 27565 919 693-3972
U OF NC

WATSON, JOHN WILLIAM FP AC
104 NEW COLLEGE STREET 53 55 55
OXFORD 27565 919 693-8126
MED COLL OF VA

WHITENER, BETTY LOU FP AC
P. O. BOX 220 59 60 77
OAK RIDGE, LA 71264 318 647-3720
U OF OKLAHOMA

GENERAL SURGERY

NOEL, RICHARD DAVID GS AC
1026 COLLEGE STREET 49 56 56
OXFORD 27565 919 693-7066
MED COLL OF GA

REEDER, PAUL ARLINGTON GS AC
1026 COLLEGE STREET 61 61 80
OXFORD 27565 919 693-7066
U OF MARYLAND

INTERNAL MEDICINE

ERTISCHEK, STEPHEN DAVID IM /GER AC
1032 COLLEGE STREET 74 77 78
OXFORD 27565 919 693-6541
U OF BOLOGNA

STEAD, EUGENE ANSON, JR. IM /CD L
ROUTE #1, BOX 194 32 47 47
BULLOCK 27507 919 684-6587
EMORY U

39. GRANVILLE COMPONENT SOCIETY (Continued)

OBSTETRICS AND GYNECOLOGY

MASSAQUOI, ALFRED DADEE LAMIN OBG AC
79 80 85
1030 COLLEGE ST.
P. O. BOX 1513
OXFORD 27565 919 693-4212
HOWARD U

PSYCHIATRY

BARKER, CAROLYN E. CULBRETH P AC
58 58 64
PO BOX 1541
OXFORD 27565 919 693-3003
U OF NC

ELLIOTT, JAMES FRANCIS, SR. P L/RT
54 54 57
ROUTE #2, BOX 405
CREEDMOOR 27522 919 528-2433
DUKE

PEDIATRICS

SIMONSON, DELLA SUE PD /PH AC
55 55 59
MURDOCH CENTER
BUTNER 27509 919 575-7631
U OF ARKANSAS

RADIOLOGY

ALKHALDI, AOUS SALIM R A
71 77
104 TRANQUIL CIRCLE
OXFORD 27565 919 693-51
DAMASCUS U

41. GREATER GREENSBORO SOCIETY OF MEDICINE

OFFICERS—**President:** Richard Rosen, M.D., 1032 Professional Village, Greensboro 27401 (919 273-9758)
Secretary: Mary John Baxley, M.D., 1008 Professional Village, Greensboro 27401 (919 272-2119)
Executive Director: James H. Busick, 1403 Sunset Dr., Suite Two, Greensboro 27408 (919 854-1563)

NO SPECIALTY LISTED

NEWMAN, CHRISTOPHER ERNEST C
84 00 89
2322 DANBURY RD.
GREENSBORO 27408 919 684-6968
BOWMAN GRAY

ALLERGY

CHARLTON, JOHN DAVID A L
42 53 55
1301 W. WENDOVER AVENUE
GREENSBORO 27408 919 275-0441
U OF W ONTARIO

ADOLESCENT MEDICINE

DOOLITTLE, ROBERT PRINCE ADL /IM AC
74 75 82
UNC-G STUDENT HEALTH CENTER
GREENSBORO 27412 919 334-5340
U OF ALABAMA

ANESTHESIOLOGY

ANDRINGA, RICHARD CORNELL AN /PD AC
74 75 79
1816 PEMBROKE RD., STE. #2
GREENSBORO 27408 919 272-3720
U OF WISCONSIN

BEAVERS, CHARLES LEE AN L/RT
38 38 46
100 MEADOWBROOK TERRACE
GREENSBORO 27408 919 273-1066
U OF PENN

BERTRAND, SCOTT ALAN AN AC
73 74 77
PO BOX 10373
GREENSBORO 27404 919 373-0372
BAYLOR

CHASE, ROBERT EUGENE AN AC
67 71 76
1816 PEMBROKE RD., STE. #2
GREENSBORO 27408 919 272-3720
M C OF WISCONSIN

CREWS, DAVID ALLEN AN AC
81 82 86
3915 E. HAZEL LANE
GREENSBORO 27408 919 299-6343
U OF NC

FORTUNE, ALEXANDER F. AN AC
85 87 83
1816 PEMBROKE RD., STE. 2
GREENSBORO 27408 919 272-3720
EAST CAROLINA U

FORTUNE, BENJAMIN FLETCHER AN L/RT
41 41 47
906 W. CORNWALLIS DRIVE
GREENSBORO 27408 919 272-7755
JEFFERSON

FREDERICK, CHARLES E. AN AC
81 82 87
612 WAYCROSS DR.
GREENSBORO 27410 919 299-6333
U OF IOWA

GRIER, RAYMOND EDWARD AN /PH AC
76 78 85
403 WILLOUGHBY BLVD.
GREENSBORO 27408 919 275-9741
YALE

KASIK, LEE AN AC
80 81 83
215 MANCHESTER PL.
GREENSBORO 27410 919 299-6343
U OF IOWA

LINDER, DONALD EARLE AN AC
74 74 77
PO BOX 9091
GREENSBORO 27408 919 288-6565
BOWMAN GRAY

LONON, ROBERT WARREN, JR. AN AC
69 73 77
5501 WESTFIELD DR.
GREENSBORO 27410 919 373-8555
DUKE

MASSAGEE, JAMES TERRILL AN AC
82 83 86
1600 INDEPENDENCE RD.
GREENSBORO 27401 919 299-6343
U OF NC

MAYNARD, DAVID RUSSELL AN AC
65 65 73
213 MISTLETOE DR.
GREENSBORO 27403 919 855-0767
DUKE

ROSENBERG, STANLEY JOSEPH AN AC
68 69 78
PO BOX 10373
GREENSBORO 27404 919 379-4092
U OF MICHIGAN

SCHUSTER, STEPHEN BARBER AN AC
80 82 84
1816 PEMBROKE RD., STE. #2
GREENSBORO 27408 919 272-3720
OHIO STATE U

SHAFER, DONALD THORNTON AN AC
74 75 77
5 MONMOUTH COURT
GREENSBORO 27410 919 373-8555
BOWMAN GRAY

WARWICK, HIGHT CLAUDIUS AN L/RT
34 34 36
7 SOMMERTON COURT
GREENSBORO 27408 919 545-1966
MED COLL OF VA

WORLAND, DAVID ERIC AN AC
74 76 78
1816 PEMBROKE RD., STE. #2
GREENSBORO 27408 919 272-3720
INDIANA U

CARDIOVASCULAR DISEASES

BRACKBILL, THOMAS ANDREW CD /CD AC
68 69 75
1011 PROFESSIONAL VILLAGE
GREENSBORO 27401 919 272-6133
COLUMBIA U

BRODIE, BRUCE ROGERS CD /IM AC
70 73 79
520 N. ELAM AVE.
GREENSBORO 27403 919 547-1700
WASHINGTON U

BUMGARNER, JOHN REED CD /CD L/RT
39 39 40
221 MISTLETOE DR.
GREENSBORO 27403 919 373-1123
MED COLL OF VA

GAMBLE, WILLIAM HEDRICK CD /IM A
76 77 8
920 CHERRY ST.
GREENSBORO 27401 919 273-790
U OF NC

HARSHAW, CHARLES WILLIAM, JR. CD /IM A
71 73 7
P. O. BOX 20928
GREENSBORO 27420 919 275-858
U OF NC

KATZ, JEFFREY DAVID CD /IM A
76 77 8
520 N. ELAM AVE.
GREENSBORO 27403 919 547-170
U OF PENN

KELLY, THOMAS A. CD A
81 83 9
520 N. ELAM AVE.
GREENSBORO 27403 919 547-170
NEW YORK U

LEBAUER, EDMUND JOSEPH CD /IM A
60 60 6
520 N. ELAM AVE.
GREENSBORO 27403 919 547-175
DUKE

LITTLE, ALFRED BOYD CD /IM A
78 79 8
1016 N. ELM ST.
GREENSBORO 27401 919 272-615
U OF NC

RUSKIN, JEROME CD A
60 60 7
301 E. WENDOVER AVE., STE. 200
GREENSBORO 27401 919 274-324
ALBERT EINSTEIN

SHELBURNE, PALMER FRIEND CD A
55 55 6
1011 PROFESSIONAL VILLAGE
GREENSBORO 27401 919 272-613
U OF NC

SMITH, HENRY W. B., III CD /IM A
78 80 8
301 W. WENDOVER DR., STE. 200
GREENSBORO 27405 919 274-324
HARVARD

TENNANT, STANLEY NEAL CD A
78 80 8
1011 PROFESSIONAL VILL.
GREENSBORO 27401 919 299-011
BOWMAN GRAY

TILLEY, WILLIAM SPENCER, JR. CD A
79 80 8
1011 PROFESSIONAL VILL.
GREENSBORO 27401 919 299-011
BOWMAN GRAY

TYSINGER, JOHN REED CD /IM A
70 72 8
1511 WESTOVER TERRACE
GREENSBORO 27408 919 373-156
MED U OF SC

WEINTRAUB, RICHARD ALAN CD /IM A
70 71 7
520 N. ELAM AVE.
GREENSBORO 27403 919 547-170
GEORGETOWN U

CARDIOVASCULAR SURGERY

BURNEY, DONALD PATRICK CDS /TS A
70 70 8
1317 N. ELM ST., STE. 1
GREENSBORO 27401 919 373-824
WASHINGTON U

41. GREATER GREENSBORO SOCIETY OF MEDICINE (Continued)

XON, SEWELL HINTON, JR. CDS /TS AC
1317 N. ELM ST., STE. 1 64 64 73
GREENSBORO 27401 919 373-8245
EMORY U

WENS, BERNARD JAMES, III CDS /GS AC
1017 PROFESSIONAL VILLAGE 72 73 84
GREENSBORO 27401 919 274-2933
DOWNSTATE ME CTR

ILSON, CHARLES HARRISON CDS /TS AC
1317 N. ELM ST., STE. 1 73 77 82
GREENSBORO 27401 919 373-8245
MED COLL OF VA

ILD NEUROLOGY

ICKLING, WILLIAM HENRY CHN /N AC
1305 W. WENDOVER AVE. 78 81 85
GREENSBORO 27408 919 275-0779
CORNELL U

ILD PSYCHIATRY

OURTS, ANDREW JOHNSON CHP /P AC
1024 PROFESSIONAL VILLAGE 58 58 66
GREENSBORO 27401 919 272-4262
U OF NC

INICAL PATHOLOGY

ROWN, ROBERT CALVIN CLP /PTH AC
223 FLEMINGTON RD. 59 59 70
CHAPEL HILL 27514 919 929-0922
U OF NC

LON AND RECTAL SURGERY

UPTON, CARROLL CRESCENT CRS L/RT
3300 STARMOUNT DRIVE 32 32 34
GREENSBORO 27403 919 299-9255
TEMPLE U

RMATOLOGY

ROW, LAURA LOMAX D AC
1030 PROF. VILLAGE 85 85 84
GREENSBORO 27401 919 966-4131
U OF NC

AVIS, ROBERT NICHOLAS D AC
600 WALTER REED DRIVE 62 62 68
GREENSBORO 27403 919 294-6555
DUKE

RASER, HUGH ERSKINE, JR. D AC
1030 PROFESSIONAL VILLAGE 56 56 62
GREENSBORO 27401 919 373-1383
MED COLL OF VA

IALL, JOHN HOWLAND D AC
1301 W. WENDOVER AVE. 64 64 69
WENDOVER MEDICAL PK.
GREENSBORO 27408 919 272-3152
DUKE

IOUSTON, FRANK MATT D AC
1030 PROFESSIONAL VILLAGE 64 64 71
GREENSBORO 27401 919 373-1383
LA STATE U

UPTON, EMMETT STEVENSON D L/RT
P. O. BOX 177 38 38 40
ALAMANCE 27201 919 228-1288
NEW YORK U

UPTON, FREDERICK ARTHUR, III D AC
1301 W. WENDOVER AVE. 86 89 90
GREENSBORO 27408 919 272-3152
BOWMAN GRAY

MCRAE, MARVIN EVERETT D L/RT
1009 COUNTRY CLUB DR. 38 38 49
GREENSBORO 27408
MED COLL OF VA

NOLAN, CLYDE, JR. D AC
1317 N. ELM ST. STE. 9 74 75 80
GREENSBORO 27401 919 379-1193
U OF NC

TURNER, WILLIAM HARRISON, III D /IM AC
1030 PROFESSIONAL VILLAGE 68 68 77
GREENSBORO 27401 919 373-1384
MED COLL OF VA

DIAGNOSTIC RADIOLOGY

BARRY, PAUL DOUGLAS DR /NM AC
#2 WALDRON COURT 76 76 81
GREENSBORO 27408 919 288-9346
U OF NC

BERTRAND, MARGARET LINS DR AC
3607 HENDERSON RD. 74 74 78
GREENSBORO 27410 919 379-0941
BAYLOR

DOYLE, OWEN WILLIAM DR AC
1013 PROFESSIONAL VILLAGE 47 54 55
GREENSBORO 27401 919 275-6481
YALE

EAGLE, ELIZABETH ANNE DR AC
PO BOX 13005 79 82 75
GREENSBORO 27415 919 379-4140
U OF NC

FISCHER, GARY JAY DR AC
P. O. BOX 13005 72 72 78
GREENSBORO 27415 919 379-4140
U OF MISSOURI

HIATT, JOHN DONALD, JR. DR AC
909 WINTERLOCHEN DR. 83 84 80
GREENSBORO 27410 919 855-7707
BOWMAN GRAY

KRINER, ARTHUR FREDERICK DR AC
P. O. BOX 13005 69 70 79
GREENSBORO 27415 919 379-4141
HAHNEMANN

LLOYD, CLARENCE DR AC
4503 BROOKHAVEN DR. 74 74 79
GREENSBORO 27406 919 275-9741
U OF NC

MAXWELL, JAMES HEATH DR AC
2313 PRINCESS ANN ST. 78 79 83
GREENSBORO 27408 919 854-6546
U OF KENTUCKY

REID, STEVEN HUNTER DR AC
PO BOX 29327 85 88 82
GREENSBORO 27429 804 741-5748
DUKE

SCOTT, JOHN LAYNE DR /NM AC
5400 CENTURY OAKS DR. 67 67 74
GREENSBORO 27405 919 854-6868
BOWMAN GRAY

SHEPHERD, ROBERT EDWARD DR AC
P. O. BOX 13005 79 80 78
GREENSBORO 27415 919 273-0325
BOWMAN GRAY

SMITH, DALLAS AARON, JR. DR AC
4507 KENBRIDGE DRIVE 76 76 83
GREENSBORO 27410 919 854-1311
BOWMAN GRAY

VIGLIONE, CHERYL ANNE DR AC
119 STAUNTON DR. 79 79 82
GREENSBORO 27410 919 274-3241
PENN STATE U

YOUNG, KYLE ALLEN DR AC
P. O. BOX 13005 69 69 73
GREENSBORO 27415 919 379-4144
BOWMAN GRAY

EMERGENCY MEDICINE

MAYER, NORMAN MICHAEL EM AC
P. O. BOX 29066 75 75 82
GREENSBORO 27408 919 379-4040
BOWMAN GRAY

ENDOCRINOLOGY

ALTHEIMER, MICHAEL D. END /IM AC
1022 PROFESSIONAL VILLAGE 81 82 86
GREENSBORO 27410 919 378-1074
U OF IOWA

GEGICK, CHARLES GEORGE END /IM AC
1022 PROFESSIONAL VILLAGE 69 70 76
GREENSBORO 27401 919 378-1143
LOYOLA U

SEVIER, ROBERT ENGLISH END /IM AC
510 N. ELAM AVE. STE, 201 66 66 75
GREENSBORO 27403 919 299-5454
U OF NC

FAMILY PRACTICE

AMEEN, WILLIAM OTIS, JR. FP /EM AC
2310 BLUE RIDGE DR. 73 73 81
GREENSBORO 27405 919 282-1164
BOWMAN GRAY

BLAND, VEITA JOYCE FP AC
1021 E. WENDOVER AVE. STE. 202 78 78 86
MEDICAL ARTS BLDG.
GREENSBORO 27405 919 373-1557
TEMPLE U

BLOMGREN, PETER FREDERICK FP AC
317 W. WENDOVER AVE. 74 74 85
GREENSBORO 27408 919 373-1794
INDIANA U

BREWER, JAMES CHESTER, JR. FP AC
P. O. BOX 8248 59 59 61
GREENSBORO 27419 919 852-7618
DUKE

BURNETT, BRENT ALAN FP C
P.O. BOX 220 84 84 91
SUMMERFIELD 27358 919 643-7711
INDIANA U

CABLE, THOMAS ALLEN FP AC
206 FISHER PARK CIRCLE 76 79 82
GREENSBORO 27401 919 379-4132
U OF FLORIDA

DREILING, DALE T. FP AC
510 N. ELAM AVE. 79 80 83
GREENSBORO 27403 919 852-3800
MED COLL OF VA

FIELDS, KARL BERTRAND FP AC
902 CAROLINA ST. 76 77 86
GREENSBORO 27401 919 379-4133
U OF KENTUCKY

FOREMAN, ROBERT HUGH FP AC
603 DOLLY MADISON RD. 73 74 81
GREENSBORO 27410 919 294-6190
U OF CINCINNATI

GUYER, EVA RUTH WARD FP AC
6303 WESTWIND DR. 83 87 90
GREENSBORO 27410 919 230-0016
BOWMAN GRAY

HALE, WAYNE A. FP /GER AC
1125 N. CHURCH ST. 74 75 87
GREENSBORO 27401 919 379-3582
U OF PITTSBURGH

HELLER, JOEL HARVEY FP AC
603 DOLLY MADISON 73 74 81
GREENSBORO 27410 919 294-6190
GEO WASHINGTON U

HENDERSON, ANITA FP AC
1016-A PROFESSIONAL VILLAGE 78 81 82
GREENSBORO 27401 919 275-6445
U OF VERMONT

HENSEL, WILLIAM ARTHUR FP AC
1125 N. CHURCH ST. 78 78 84
GREENSBORO 27401 919 379-4035
OHIO STATE U

LALONDE, JOHN CHARLES FP AC
104 E. NORTHWOOD ST. 75 75 80
GREENSBORO 27401 919 275-6445
OHIO STATE U

LITTLE, KEVIN L. FP AC
603 DOLLY MADISON RD. 84 84 88
GREENSBORO 27410 919 294-6190
GEO WASHINGTON U

MAZZOCCHI, ANNMARIE FP AC
1016-A PROFESSIONAL VILLAGE 82 83 88
GREENSBORO 27401 919 282-1918
COLUMBIA U

MILLER, STEPHEN MAURICE FP /EM AC
603 DOLLY MADISON 74 76 78
GREENSBORO 27410 919 294-6190
U OF NC

41. GREATER GREENSBORO SOCIETY OF MEDICINE (Continued)

MITCHELL, LEWIS DEAN FP AC
301 E. WENDOVER AVE., STE. 310 82 84 87
GREENSBORO 27401 919 379-1156
U OF SOU FLORIDA

REID, WILLIAM JOSEPH FP /ALD L
2301 DANBURY ROAD 48 49 51
GREENSBORO 27408 919 274-6171
NEW YORK MED COL

ROGERS, TATE MOSELEY FP AC
102 POMONA DR. 76 76 91
GREENSBORO 27407 919 299-0000
U OF NC

STAFFORD, WILLIE RANSOME, JR. FP /OM AC
948 WALKER AVENUE 56 56 60
GREENSBORO 27403 919 275-7665
U OF NC

THACKER, ROBERT KELLER FP AC
603 DOLLY MADISON RD. 73 74 81
GREENSBORO 27410 919 294-6190
U OF FLORIDA

WOLFF, GEORGE THOMAS FP AC
301 E. WENDOVER AVE., STE. 310 52 52 56
GREENSBORO 27401 919 379-1156
JEFFERSON

FACIAL PLASTIC SURGERY, OTO

PATSEAVOURAS, LOUIE LEE FPS AC
522 N. ELAM AVENUE 61 61 67
GREENSBORO 27403 919 299-4907
U OF NC

GASTROENTEROLOGY

BUCCINI, ROBERT V. GE /IM AC
1511 WESTOVER TERR., STE. 108 81 86 89
GREENSBORO 27408 919 378-0713
U OF CHICAGO

EDWARDS, JAMES L., JR. GE /IM AC
1511 WESTOVER TERR. STE. 108 81 82 86
GREENSBORO 27408 919 378-0713
MED U OF SC

JOHNSON, MARTIN KAY GE /IM AC
1904 N. CHURCH ST. 74 77 00
GREENSBORO 27405 919 379-4062
U OF ALABAMA

LEBAUER, SAMUEL MORGENSTERN GE/IM AC
PO BOX 10828 67 67 81
520 N. ELAM AVE.
GREENSBORO 27404 919 547-1700
U OF VIRGINIA

LHOTSKY-BRODIE, DORA GE /IM AC
PO BOX 10828 75 75 85
520 N. ELAM AVE.
GREENSBORO 27404 919 547-1700
DUKE

MEDOFF, JEFFREY ROY GE AC
520 N. ELAM AVE. 77 77 85
GREENSBORO 27403 919 547-1700
NEW YORK MED COL

PATTERSON, DAVID READ GE /IM AC
520 N. ELAM AVE. 73 73 79
GREENSBORO 27403 919 547-1700
U OF NC

WEISSMAN, JAMES MICHAEL GE /IM AC
1904 N. CHURCH STREET 70 71 79
GREENSBORO 27405 919 274-3241
U OF ILLINOIS

GERIATRICS

STONEKING, HAL THOMAS GER /IM AC
1200 N. ELM ST. 83 84 90
GREENSBORO 27401 919 271-4812
U OF KENTUCKY

GENERAL PRACTICE

BARBEE, LEWIS ELISHA GP AC
4928 SYLVANGLADE ROAD 63 64 79
MCLEANSVILLE 27301 919 375-3434
HOWARD U

BEAVERS, JAMES WALLACE GP L/RT
2206 W. MARKET ST. 30 30 35
GREENSBORO 27403 919 272-3487
U OF PENN

CONNELLY, JERRY HUBBARD GP /GPM AC
212-C W. WENDOVER AVE. 63 64 84
GREENSBORO 27401 919 275-3828
INDIANA U

JONES, NORMAN NESBETH GP /GE AC
1019 S. ENGLISH ST. 47 49 76
GREENSBORO 27401 919 274-0097
HOWARD U

LEPORE, RALPH GP AC
4801 FOREST OAKS DR. 63 66 86
GREENSBORO 27406 919 674-7117
NEW YORK MED COL

MCRAE, WILLIAM KENNETH GP RT
815 WINVIEW DR. 64 64 68
GREENSBORO 27410 919 299-7944
BOWMAN GRAY

GENERAL SURGERY

ABRAMS, MURRAY STANLEY GS AC
311 W. WENDOVER AVE. 65 66 72
GREENSBORO 27408 919 275-8415
TEMPLE U

ARKIN, ROY MARC GS AC
721 GREEN VALLEY RD. 69 74 77
GREENSBORO 27408 919 275-2889
NEW YORK MED COL

BALLEN, PATRICK LASELVE GS AC
1511 WESTOVER TERR., STE. 103 75 76 82
GREENSBORO 27408 919 378-1583
CORNELL U

BLIEVERNICHT, STEPHEN WALDO GS AC
1014 PROFESSIONAL VILLAGE 69 71 83
GREENSBORO 27401 919 373-1078
EMORY U

BOWMAN, WILLIAM EDMUND, JR. GS /VS AC
1317 N. ELM ST., STE. #5 74 79 82
GREENSBORO 27401 919 274-8444
U OF NC

CLUTTS, GEORGE ROBERT GS /TS L/RT
277 N. PARK DR. 48 48 48
GREENSBORO 27401 919 275-9554
NORTHWESTERN U

COGGESHALL, ALLAN BANCROFT GS L/RT
109 BEVERLY PLACE 40 49 50
GREENSBORO 27403 919 299-7190
RUSH MED COLL

DAVIS, PHILIP BIBB GS L
1125 GATEHOUSE RD. 26 26 29
HIGH POINT 27260 305 276-6779
JEFFERSON

DAVIS, TIMOTHY EUGENE GS /CRS AC
1317 N. ELM ST., STE. #5 71 71 78
GREENSBORO 27401 919 274-8444
U OF ARKANSAS

DIXON, JAMES WELLINGTON GS /GP AC
P. O. BOX 20085 57 57 66
GREENSBORO 27420 919 378-1957
MEHARRY MED COLL

FARLEY, ROBERT HUGH GS AC
311 W. WENDOVER AVE. 56 64 65
GREENSBORO 27408 919 275-8415
ST LOUIS U

GERHARDT, EDWARD BURTON GS /TS AC
1317 N. ELM ST. STE. 1 81 87 89
GREENSBORO 27401 919 373-8245
U OF VIRGINIA

HOXWORTH, BENJAMIN T. GS AC
1014 PROF. VILLAGE 80 87 89
GREENSBORO 27401 919 373-1078
U OF CINCINNATI

HUNTER, JOHN GRAY GS /CRS L/RT
41 FOUNTAIN MANOR DR. #D 43 43 51
GREENSBORO 27405 919 274-7998
U OF PENN

INGRAM, HAYWOOD MELTON GS AC
1317 N. ELM ST., STE. #5 78 80 85
P. O. BOX 10037
GREENSBORO 27401 919 274-8444
BOWMAN GRAY

LEBAUER, MAURICE LEON GS L/R
2023 ST. ANDREWS RD. 29 30 3
GREENSBORO 27408 919 273-325
U OF VIRGINIA

LEONE, MICHAEL RALPH GS AC
1317 N. ELM ST. STE. #5 67 68 7
PO BOX 10037
GREENSBORO 27401 919 274-844
JEFFERSON

MARTIN, MATTHEW BRUNSON GS AC
311 W. WENDOVER AVE. 79 79 7
GREENSBORO 27408 919 275-841
U TX-SOU.WESTERN

MORRIS, MARSHALL G., JR. GS /TS L/R
806 NOTTINGHAM DR. 46 46 5
GREENSBORO 27408
BOWMAN GRAY

NEWMAN, DAVID HAROLD GS AC
200 E. NORTHWOOD ST., STE.304 80 81 8
GREENSBORO 27401 919 378-981
BOWMAN GRAY

PRICE, THOMAS BAKER GS AC
510 N. ELAM AVE., STE. 303 64 64 7
GREENSBORO 27403 919 378-981
DUKE

STRECK, CHRISTIAN JOHN GS AC
311 W. WENDOVER AVE. 71 76 7
GREENSBORO 27408 919 275-841
U OF FLORIDA

WANEK, ELIZABETH ANN GS /PDS AC
1018 PROFESSIONAL VILL. 82 86 8
GREENSBORO 27401 919 272-616
CREIGHTON U

WEATHERLY, WILLIAM JESSE GS AC
1014 PROFESSIONAL VILLAGE 70 70 8
GREENSBORO 27401 919 373-107
U OF NC

YOUNG, PETER RUSSELL GS AC
1317 N. ELM ST., STE. #5 61 61 6
PO BOX 10037
GREENSBORO 27401 919 274-844
EMORY U

GYNECOLOGY

ABRAHAMS, STUART JOEL GYN AC
721 GREEN VALLEY RD., STE. 300 57 64 6
GREENSBORO 27408 919 275-539
U OF MARYLAND

BARKER, JULIAN GYN AC
721 GREEN VALLEY RD., STE. 201 57 60 6
GREENSBORO 27408 919 378-111
ST U OF NY-BUFF

BROOKS, JEAN BAILEY GYN L/R
1100 N. ELM STREET 44 44 4
GREENSBORO 27401 919 273-865
BOWMAN GRAY

HAMBRIGHT, RUFUS ROBERTS GYN L/R
9-B FOUNTAIN MANOR DR. 50 58 5
GREENSBORO 27405 919 273-256
DUKE

RAY, WALTER CARROLL GYN AC
104 W. NORTHWOOD ST. 61 62 6
GREENSBORO 27401 919 370-098
U OF ALABAMA

SCHAAL, JENNIFER C. GYN AC
1507 WESTOVER TERR., STE. C 82 84 8
GREENSBORO 27408 919 273-366
U OF NC

SMITH, WILLIAM SIEGFRIED, JR. GYN AC
104 W. NORTHWOOD STREET 61 61 6
GREENSBORO 27401 919 378-184
DUKE

WILLIAMS, JOHN DUDLEY, JR. GYN L
1715-A W. MARKET ST. 30 31 5
GREENSBORO 27403 919 272-883
TEMPLE U

HAND SURGERY

KUZMA, GARY ROBERT HS /ORS AC
1103 N. ELM ST., STE. 200 75 75 8
GREENSBORO 27401 919 378-081
SUNY-SYRACUSE

41. GREATER GREENSBORO SOCIETY OF MEDICINE (Continued)

EYERDIERKS, ELIZABETH M. HS /ORS AC
1103 N. ELM ST. 81 82 88
GREENSBORO 27401 919 378-0811
TULANE U

/PHER, ROBERT V., JR. HS /ORS AC
1103 N. ELM ST. 77 78 85
GREENSBORO 27401 919 378-0811
SUNY-SYRACUSE

ECTIOUS DISEASES

ANE, TIMOTHY WALTER ID /IM AC
1200 N. ELM ST. 71 78 85
GREENSBORO 27401 919 379-4062
CORNELL U

OBINSON, EDWARD N., JR. ID /IM AC
1200 N. ELM ST. 79 82 80
GREENSBORO 27401 919 379-4062
BOWMAN GRAY

ERNAL MEDICINE

LLGOOD, JOHN WILLIAM, JR. IM L/RT
1503 PEBBLE DR. 38 38 46
GREENSBORO 27410 919 292-2196
EMORY U

RONSON, RICHARD ADLER IM /DIA AC
510 N. ELAM AVE. 86 90 90
GUILFORD MEDICAL ASSOCIATES
GREENSBORO 27403 919 299-5454
BOWMAN GRAY

AXLEY, MARY JOHN IM /PD AC
1008 PROFESSIONAL VILLAGE 82 83 87
GREENSBORO 27401 919 272-2119
U OF NC

ROWN, FRANK REID IM L/RT
1103 COUNTRY CLUB DRIVE 38 38 46
GREENSBORO 27408 919 272-5048
VANDERBILT U

RUCE, JAMES CRAWFORD IM /CD L/RT
1036 PROFESSIONAL VILLAGE 51 55 56
GREENSBORO 27401 919 378-9180
GEO WASHINGTON U

RYAN, EDWIN LANCASTER IM /CD AC
510 N. ELAM AVE. #201 61 61 68
GREENSBORO 27403 919 299-5454
U OF PENN

ARANDANG, NAPOLEON VELUZ IM /OM AC
AT&T TECHNOLOGIES, INC. 62 70 78
P. O. BOX 25000
GREENSBORO 27420 919 279-3627
U OF PHILIPPINES

ARDWELL, WILLARD IM /CD L/RT
2312 LAFAYETTE 32 36 37
GREENSBORO 27408 919 288-4740
MED COLL OF VA

ARRETT, NORMAN HESSON, JR. IM /END AC
1038 PROFESSIONAL VILLAGE 50 52 54
GREENSBORO 27401 919 378-9131
DUKE

LMORE, BROOKS WEBSTER IM AC
342 N. ELM STREET 56 56 61
GREENSBORO 27401 919 274-6373
U OF PENN

REEN, ARTHUR GERRISH, III IM /GER AC
1511 WESTOVER TERRACE 73 74 74
GREENSBORO 27408 919 373-1184
TULANE U

REEN, EDWIN JAY IM AC
1317 N. ELM ST. STE. #2 74 75 79
GREENSBORO 27401 919 373-1676
U OF TENNESSEE

ROVE, DAVID DWIGHT IM /CD AC
1511 WESTOVER TERRACE 70 80 86
GREENSBORO 27408 919 373-1184
U OF CHICAGO

UEST, CHRIS WARREN IM /OM AC
102 POMONA DRIVE 74 75 78
GREENSBORO 27407 919 299-0000
U OF OKLAHOMA

ARRIS, CARLTON MCKENZIE IM L/RT
#2 NEW BERN SQUARE 47 48 54
GREENSBORO 27408 919 282-8111
BOWMAN GRAY

HENSON, JOSEPH BASCOM, JR. IM L/RT
1107 W. FRIENDLY AVENUE 45 46 51
GREENSBORO 27401 919 274-1567
TEMPLE U

HERRING, WILLIAM BENJAMIN IM /HEM AC
1200 N. ELM ST. 53 53 60
GREENSBORO 27401 919 379-4062
BOWMAN GRAY

JOYNER, SAMUEL BALFOUR IM AC
510 N. ELAM AVE., STE. 201 55 55 61
GREENSBORO 27403 919 299-5454
U OF NC

KOHUT, WALTER DENNIS IM /END AC
1511 WESTOVER TERRACE 73 82 84
GREENSBORO 27408 919 373-1054
U OF CINCINNATI

KWIATKOWSKI, PETER FRANK IM AC
408-B PARKWAY DR. 76 76 83
GREENSBORO 27401 919 275-9804
MED COLL OF GA

LEBAUER, EUGENE SHANER IM /A AC
PO BOX 10828 65 65 81
520 N. ELAM AVE.
GREENSBORO 27404 919 547-1700
DUKE

LEVITIN, PETER MARK IM /RHU AC
301 E. WENDOVER., STE. 200 69 70 76
GREENSBORO 27401 919 274-3241
U OF PENN

MARKS, EDGAR SEYMOUR IM S/RT
5-B FOUNTAIN MANOR DR. 45 48 48
GREENSBORO 27405 919 378-9906
BOWMAN GRAY

MCKEOWN, WILLIAM DAVID IM /GER AC
1511 WESTOVER TERR., STE. 108 76 76 76
GREENSBORO 27408 919 378-9906
BOWMAN GRAY

MOORE, JOHN ANDREW IM /RHU AC
1511 WESTOVER TERRACE 48 54 55
GREENSBORO 27408 919 373-0951
MED COLL OF VA

MURRAY, WILLIAM GRAY IM L/RT
1808 CARLISLE ROAD 44 47 48
GREENSBORO 27408 919 274-5155
DUKE

NADEL, SCOTT MARTIN IM /PUD AC
520 N. ELAM AVE. 75 76 82
GREENSBORO 27403 919 547-1700
U OF MIAMI

NORINS, MICHAEL ELLIOTT IM AC
520 N. ELAM AVE. 86 87 83
GREENSBORO 27403 919 547-1700
U OF NC

OSBORNE, JAMES C. IM AC
1904 N. CHURCH ST. 83 84 86
GREENSBORO 27405 919 274-3241
U OF NC

PARKER, HERMAN RICHARD, JR. IM AC
408-B PARKWAY DRIVE 67 67 73
GREENSBORO 27401 919 275-9804
U OF NC

POWELL, ALVIN CALDWELL IM /NEP C
111 W. WENDOVER AVE. 82 82 91
GREENSBORO 27401 919 379-9708
TUFTS U

RABOLD, LEONARD JAMES IM L/RT
209 HOMEWOOD AVENUE 41 48 49
GREENSBORO 27403 919 379-4025
VANDERBILT U

ROGERS, CHARLES STEWART IM AC
1200 N. ELM STREET 73 73 85
GREENSBORO 27401 919 379-4062
U OF NC

ROSEN, RICHARD JAMES IM /HEM AC
1032 PROFESSIONAL VILLAGE 55 65 78
GREENSBORO 27401 919 273-9758
GEO WASHINGTON U

SAWYER, JOHN WILSON IM AC
609 WALTER REED DRIVE 52 52 56
GREENSBORO 27403 919 299-2815
CASE WESTERN RES

SHORT, SYDNEY GLEN IM AC
1702 WESTCHESTER DR. 83 84 83
DALTON, GA 30720 919 273-7900
WEST VA U

SILLMON, DAVID WILDE IM /HEM AC
1511 WESTOVER TERRACE 63 63 71
GREENSBORO 27408 919 373-0611
U OF NC

SMITH, O. NORRIS IM L/RT
202 W. BESSEMER AVENUE 33 33 38
GREENSBORO 27401 919 273-7494
U OF PENN

SPARROW, HARRY WARD IM L
342 N. ELM STREET 44 44 47
GREENSBORO 27401 919 275-8436
NORTHWESTERN U

STREETS, JULIA SINK IM AC
1511 WESTOVER TERR., STE. 108 84 84 88
GREENSBORO 27408 919 378-9906
U OF NC

STUCKEY, THOMAS DAVID IM /CD AC
520 N. ELAM AVE. 79 81 87
GREENSBORO 27403 919 547-1700
OHIO STATE U

SULLIVAN, RAYMOND C.,JR. IM /AM AC
1511 WESTOVER TERRACE 69 69 74
GREENSBORO 27408 919 378-1461
U OF FLORIDA

TOWNSEND, MURPHY FURMAN, JR. IM AC
1007 PROFESSIONAL VILLAGE 61 62 65
GREENSBORO 27401 919 272-2141
BOWMAN GRAY

VATZ, BENJAMIN IM L/RT
1904 N. CHURCH STREET 45 45 50
GREENSBORO 27405 919 274-3241
DUKE

VAUGHAN, EDWIN WARNER IM /RIP L/RT
2632 WALKER AVENUE 37 37 40
GREENSBORO 27403 919 299-7909
U OF VIRGINIA

WAINER, HOWARD SCHEYER IM /GE AC
301 E. WENDOVER AVE. 54 54 60
GREENSBORO 27401 919 274-3241
BOWMAN GRAY

WELBORN, JULIUS WARREN, JR. IM /OM L/RT
4803 OAKCLIFFE RD. 51 52 52
GREENSBORO 27406 919 674-2020
MED U OF SC

WERT, MICHAEL B. IM AC
520 N. ELM ST.
GREENSBORO 27403 919 547-1700

INDUSTRIAL MEDICINE

FAHEY, PHILIP JAMES IND /U AC
JEFFERSON-PILOT LIFE INS. CO. 55 56 88
PO BOX 21008
GREENSBORO 27420 919 378-6482
NAT U OF IRELAND

NEUROLOGY

ADELMAN, JAMES U. N AC
510 N. ELAM AVE., STE. 302 67 68 74
GREENSBORO 27403 919 547-8000
NORTHWESTERN U

HATCHER, MARTIN ARMSTEAD N AC
1305 W. WENDOVER AVENUE 62 62 68
GREENSBORO 27408 919 275-0779
DUKE

KISER, JEFFERSON B., JR. N AC
1910 N. CHURCH ST. 71 72 77
GREENSBORO 27405 919 273-2511
MED COLL OF VA

LOVE, JAMES MCLEAN N /IM AC
2007 LAFAYETTE DRIVE 72 72 81
GREENSBORO 27408 919 275-0779
DUKE

SCHMIDT, JEFFREY JAY N AC
1305 W. WENDOVER AVE. 81 85 90
GREENSBORO 27408 919 275-0779
UNIV OF REIMS

STIEFEL, JOSEPH WALTER N AC
1910 N. CHURCH ST. 58 60 66
GREENSBORO 27405 919 273-2511
U OF TENNESSEE

41. GREATER GREENSBORO SOCIETY OF MEDICINE (Continued)

WILLIS, CHARLES KEITH N AC
1910 N. CHURCH ST. 84 88 89
GUILFORD NEUROLOGICAL ASSOCS.
GREENSBORO 27405 919 273-2511
U OF VIRGINIA

NEPHROLOGY

DETERDING, JAMES LEROY NEP /IM AC
111 W. WENDOVER AVE. 79 79 84
GREENSBORO 27401 919 379-9708
U OF NEBRASKA

FOX, RICHARD FRANKLIN NEP /IM AC
111 W. WENDOVER AVE. 75 76 84
GREENSBORO 27401 919 379-9708
U OF NC

GARBER, RONALD LEWIS NEP /IM AC
111 W. WENDOVER AVE. 67 67 75
GREENSBORO 27401 919 379-9708
MED U OF SC

OLIN, DAVID BAKER NEP /IM AC
111 W. WENDOVER AVE. 68 68 77
GREENSBORO 27401 919 379-9708
OHIO STATE U

NEONATAL-PERINATAL MEDICINE

RANSOM, JAMES LAURENCE NPM /PHO AC
1200 N. ELM ST. 73 73 88
GREENSBORO 27401 919 379-3977
BOWMAN GRAY

WYBLE, LANCE EDWARD NPM /PD C
PO BOX 29526 82 83 90
THE WOMENS HOSP. OF GREENSBORO
GREENSBORO 27429 919 379-3963
U OF MISSISSIPPI

NEUROLOGICAL SURGERY

AMES, RICHARD HAIGHT NS L/RT
2316 PRINCESS ANN ST. 41 48 49
GREENSBORO 27408 919 288-0421
DUKE

BLOMQUIST, GUSTAV ARTHUR, JR. NS AC
1021 E. WENDOVER AVE.,STE. 103 73 74 82
GREENSBORO 27405 919 275-1111
VANDERBILT U

BOTERO, ERNESTO MIGUEL NS AC
200 E. NORTHWOOD ST., STE. 312 73 73 85
GREENSBORO 27401 919 272-4578
U OF CARTAGENA

CLONINGER, KENNETH LEE, JR. NS AC
200 E. NORTHWOOD ST., STE. 504 61 61 69
GREENSBORO 27401 919 272-4578
U OF MARYLAND

DEATON, PHILIP CARL NS AC
200 E. NORTHWOOD ST., STE. 504 66 66 76
GREENSBORO 27401 919 379-0077
U OF NC

ELSNER, HENRY JOSEPH NS C
200 E. NORTHWOOD ST. 83 89 90
GREENSBORO 27401 919 272-4578
RUTGERS MED SCH

NUDELMAN, ROBERT W. NS AC
1613 COLONAIL AVE. 82 84 88
GREENSBORO 27408 919 272-4578
BOSTON U

ROBINSON, STEPHEN CARY NS AC
200 E. NORTHWOOD ST., STE. 312 67 67 75
GREENSBORO 27401 919 272-4578
DUKE

OBSTETRICS AND GYNECOLOGY

BARKLEY, KARL LEE OBG AC
721 GREEN VALLEY RD.,SUITE 102 62 62 67
GREENSBORO 27408 919 273-2411
U OF NC

BERRY, FRANCIS XAVIER OBG L/RT
1208 COLONIAL AVE. 42 53 53
GREENSBORO 27408 919 272-2155
GEORGETOWN U

BRANTLEY, JULIAN THWEATT OBG L/RT
6-C FOUNTAINVIEW CIR. 44 44 49
GREENSBORO 27405 919 272-9840
HARVARD

COX, RAYMOND L. OBG AC
WOMENS HOSP. OF GREENSBORO 74 75 89
801 GREEN VALLEY RD.
GREENSBORO 27408 919 379-3641
U OF PENN

DICKSTEIN, SHERRY ANNE OBG AC
301 E. WENDOVER AVE. 78 82 85
GREENSBORO 27401 919 273-2835
U OF VERMONT

FONTAINE, TIMOTHY PAUL OBG AC
721 GREEN VALLEY RD., STE. 300 81 85 90
GREENSBORO 27408 919 275-5391
U OF PITTSBURGH

FORE, STEVEN RONALD OBG AC
721 GREEN VALLEY RD.,STE. 300 68 68 79
GREENSBORO 27408 919 275-5391
BOWMAN GRAY

FORHAN, SARA ELLEN OBG AC
301 E. WENDOVER AVE. 83 84 89
GREENSBORO 27401 919 273-2835
U OF CALIFORNIA

GOTTSEGEN, DANIEL LEO OBG AC
721 GREEN VALLEY RD., STE. 300 69 70 79
GREENSBORO 27408 919 275-5391
TUFTS U

GRAY, PATRICK HAMPTON OBG AC
510 N. ELAM AVE., STE. 101 80 84 77
GREENSBORO 27403 919 854-8800
BOWMAN GRAY

HARPER, CHARLES A., JR. OBG AC
WOMEN'S HOSP. OF GREENSBORO 85 86 90
801 GREEN VALLEY RD.
GREENSBORO 27408 919 691-6877
U OF NC

HAYGOOD, VANESSA PEARLINE OBG AC
721 GREEN VALLEY RD., STE. 101 78 81 82
GREENSBORO 27408 919 292-7010
HARVARD

HENLEY, THOMAS FRANKLIN OBG AC
510 N. ELAM AVE., STE. 101 68 68 76
GREENSBORO 27403 919 854-8800
DUKE

HOLLAND, RICHARD M. OBG AC
721 GREEN VALLEY RD. 80 82 87
GREENSBORO 27408 919 574-2229
U OF KENTUCKY

KAPLAN, RICHARD DAVID OBG AC
721 GREEN VALLEY RD., STE. 201 75 76 80
GREENSBORO 27408 919 378-1110
U OF PENN

LOMAX, CHARLES WESTON OBG AC
510 N. ELAM AVE., STE. 301 68 69 77
GREENSBORO 27403 919 299-8020
BOWMAN GRAY

MABRY, EDWARD BLOXTON OBG AC
1305 W. WENDOVER AVENUE 53 57 60
GREENSBORO 27408 919 274-6355
DUKE

MANESS, ARCHIBALD KELLY, JR. OBG AC
301 E. WENDOVER AVE. 62 62 70
GREENSBORO 27401 919 273-2835
U OF PENN

MARSHALL, BERNARD ANTHONY OBG AC
P. O. BOX 21922 72 73 81
GREENSBORO 27406
HOWARD U

MATTHEWS, CYNTHIA PIKE OBG AC
721 GREEN VALLEY RD., STE.300 82 86 90
GREENSBORO 27408 919 275-5391
BOWMAN GRAY

MATTHEWS, JAMES AUSTIN OBG AC
721 GREEN VALLEY RD., STE. 300 81 82 90
GREENSBORO 27401 919 275-5391
BOWMAN GRAY

MCCOMB, JOHN SANFORD OBG AC
721 GREEN VALLEY RD., STE. 200 80 83 8
GREENSBORO 27408 919 574-222
BOWMAN GRAY

MCPHAIL, SCHUBERT DEAN OBG AC
1517 N. CHURCH ST. 63 63 7
GREENSBORO 27405 919 379-846
MED U OF SC

MEZER, HOWARD CABITT OBG /END AC
301 E. WENDOVER AVE. #400 77 78 8
GREENSBORO 27401 919 273-283
TUFTS U

NARINS, JOSEPH PAUL OBG C
301 E. WENDOVER AVE., STE. 400 83 84 8
GREENSBORO 27401 919 273-283
WAYNE STATE U

NEAL, WILLIAM RONALD OBG AC
1507 WESTOVER TERR. 74 74 8
GREENSBORO 27408 919 273-366
U OF NC

NEWELL, MCARTHUR OBG AC
721 GREEN VALLEY RD.,STE. 103 73 74 8
PO BOX 21503
GREENSBORO 27408 919 274-155
U OF NC

PERRY, HENRY BAKER, JR. OBG L/RT
17 NORTHLINE PL. 43 43 4
GREENSBORO 27410 919 294-202
U OF MARYLAND

ROSS, ALLAN OBG AC
721 GREEN VALLEY RD., STE. 201 75 79 7
GREENSBORO 27408 919 378-111
U OF PENN

RUSSELL, EUGENE FAIRCHILD,III OBG AC
510 N. ELAM AVE., STE. 101 65 65 7
GREENSBORO 27403 919 273-256
U OF VIRGINIA

SMITH, LYNN KEBEL OBG AC
1507 WESTOVER TERR., STE. C 84 87 8
GREENSBORO 27408 919 273-366
U OF IOWA

STRINGER, ARTHUR VERNON OBG AC
914 MONTICELLO ST. 82 84 8
GREENSBORO 27410 919 230-111
DUKE

WEIN, ROBERT MICHAEL OBG AC
721 GREEN VALLEY RD., STE. 201 72 72 7
GREENSBORO 27408 919 378-111
U OF VIRGINIA

OCCUPATIONAL MEDICINE

BURKHART, VERNON ANDERSON OM /IM AC
2700 W. MARKET ST. 50 51 7
GREENSBORO 27403 919 379-696
U OF TENNESSEE

IMBUS, HAROLD ROGER OM AC
420 GALLIMORE DAIRY RD. 54 54 7
GREENSBORO 27409 919 665-181
U OF CINCINNATI

JOHNSON, PETER GRAHAM OM /FP C
420 GALLIMORE DAIRY RD. 76 77 7
GREENSBORO 27409 919 282-235
DALHOUSIE U

LASHLEY, CURTIS R. OM AC
JEFFERSON-PILOT LIFE INS.CO. 59 59 6
PO BOX 21008
GREENSBORO 27420 919 691-319
U OF NC

LEWIS, ARCH RITCHIE OM /IM AC
3100 ROUND HILL RD. 65 65 7
GREENSBORO 27408 919 668-378
BOWMAN GRAY

STARR, HENRY FRANK, JR. OM RT
3106 ALAMANCE RD. 48 48 5
GREENSBORO 27407 919 299-430
JEFFERSON

ONCOLOGY

KARB, KENNETH SAMUEL ON /IM AC
1007 PROFESSIONAL VILLAGE 72 72 79
GREENSBORO 27401 919 272-2141
U OF VIRGINIA

41. GREATER GREENSBORO SOCIETY OF MEDICINE (Continued)

USK, JOHN ALEXANDER, III ON /IM AC
1007 PROFESSIONAL VILLAGE 51 58 59
GREENSBORO 27401 919 272-2141
U OF ALABAMA

URINSON, DONALD S. ON /HEM AC
1511 WESTOVER TERRACE 72 72 86
GREENSBORO 27408 919 373-0611
U OF VERMONT

EIJSTROM, ERIC SHERWOOD ON /IM AC
1007 PROFESSIONAL VILLAGE 76 78 82
GREENSBORO 27401 919 272-2141
U OF VIRGINIA

PHTHALMOLOGY

ERGIN, DONALD J. OPH AC
3312 BATTLEGROUND AVE. 75 77 87
GREENSBORO 27410 919 282-5000
DUKE

REWINGTON, THOMAS ELMER, JR. OPH AC
P. O. BOX 20346 69 70 77
GREENSBORO 27420 919 272-5628
MEHARRY MED COLL

RUMBACK, GEORGE FRANKLIN OPH AC
1105 MONTPELIER 59 64 68
GREENSBORO 27401 919 274-4626
U OF TENNESSEE

IGBY, DONALD JOE OPH AC
721 GREEN VALLEY RD. STE. 406 76 78 85
GREENSBORO 27408 919 230-1010
MED COLL OF GA

EPES, CHARLES RICHARD OPH AC
3312 BATTLEGROUND AVE. 68 68 75
GREENSBORO 27410 919 282-5000
U OF VIRGINIA

ROAT, ROBERT LANIER OPH AC
1317 N. ELM ST., STE. #4 70 74 75
GREENSBORO 27401 919 378-1442
HARVARD

ACKLIN, HAROLD NORMAN OPH AC
1014 N. ELM STREET 60 68 68
GREENSBORO 27401 919 274-2149
SUNY-SYRACUSE

ONDON, HOWARD B. OPH AC
1511 WESTOVER TERR. 68 73 84
GREENSBORO 27408 919 378-1632
CHICAGO MED SCH

ATTHEWS, JOHN DAIL OPH AC
3312 BATTLEGROUND AVE. 79 80 85
GREENSBORO 27410
MED U OF SC

ILLS, WARDELL HARDEE OPH L/RT
1202 COUNTRY CLUB DRIVE 40 40 48
GREENSBORO 27408 919 274-3391
DUKE

DOM, TERRY DAVID OPH AC
411-C PARKWAY DR. 79 80 87
GREENSBORO 27401 919 272-6355
BOWMAN GRAY

REFONTAINE, J. EDOUARD OPH L/RT
830 SOUTHEASTERN BLDG. 27 31 34
GREENSBORO 27401 919 272-3523
LAVAL U

OLLINS, HAL JUDD, JR. OPH AC
348 N. ELM STREET 58 58 65
GREENSBORO 27401 919 274-4626
DUKE

ETHI, SHASHI K. OPH AC
1021 E. WENDOVER AVE., STE.101 67 67 86
GREENSBORO 27405 919 273-7813
MAULANA AZAD

HAPIRO, MARK THOMAS OPH AC
1311 N. ELM ST. 70 70 85
GREENSBORO 27401 919 378-9993
OHIO STATE U

IMEL, PAUL JOSEPH OPH AC
300 W. NORTHWOOD ST. 55 61 81
GREENSBORO 27401 919 275-5673
BOSTON U

AYLOR, SHAHANE RICHARDSON, JR OPH AC
348 N. ELM STREET 59 59 63
GREENSBORO 27401 919 274-4626
U OF NC

TYSON, SAMUEL LESTER OPH AC
300 W. NORTHWOOD ST. 85 88 89
GREENSBORO 27401 919 275-5673
TUFTS U

ORTHOPEDIC SURGERY

APLINGTON, JAMES PAGE ORS AC
PO BOX 14580 66 66 76
315 W. WENDOVER AVE.
GREENSBORO 27415 919 275-0724
JOHNS HOPKINS

CARTER, PHILIPS JOHN ORS AC
PO BOX 14580 62 62 72
315 W. WENDOVER AVE.
GREENSBORO 27415 919 275-0724
TULANE U

DILWORTH, JOHN HERBERT ORS /HS AC
1505 WESTOVER TERR. 58 58 70
GREENSBORO 27408 919 275-0927
U OF VIRGINIA

DYE, DAVID GODDARD ORS AC
809 GREEN VALLEY RD. 68 68 85
GREENSBORO 27408 919 275-3325
MED COLL OF GA

GIOFFRE, RONALD ANTHONY ORS AC
PO BOX 14580 65 79 80
315 W. WENDOVER AVE.
GREENSBORO 27415 919 275-0724
M C OF WISCONSIN

HARKINS, PAUL DUANE ORS /HS AC
1505 WESTOVER TERR. 62 63 74
GREENSBORO 27408 919 275-0927
U OF PITTSBURGH

KREGE, JOHN WILSON ORS AC
1505 WESTOVER TERR. 66 66 77
GREENSBORO 27408 919 275-0927
EMORY U

LAVENDER, DICK REDMOND ORS AC
201 E. WENDOVER AVENUE 61 61 78
GREENSBORO 27401 919 275-6318
BOWMAN GRAY

LONG, PAUL DEMARS ORS AC
1505 WESTOVER TERR. 62 62 71
GREENSBORO 27408 919 275-0927
U OF MICHIGAN

MAULTSBY, JAMES ALEXANDER ORS /PM AC
1915 LENDEW ST. 57 57 69
GREENSBORO 27408 919 373-0312
BOWMAN GRAY

MURPHY, DANIEL F. ORS /SM AC
809 GREEN VALLEY RD. 81 82 86
GREENSBORO 27408 919 275-3325
TEMPLE U

NITKA, JAMES EDWARD ORS AC
315 W. WENDOVER AVE. 83 83 88
GREENSBORO 27408 919 275-0724
U. OF ARIZONA

PAUL, VINCENT EDGAR ORS AC
809 GREEN VALLEY RD. 76 76 82
GREENSBORO 27408 919 275-3325
U OF NC

PRESSON, THOMAS LEMUEL ORS AC
PO BOX 14580 65 65 74
315 W. WENDOVER AVE.
GREENSBORO 27415 919 275-0724
U OF NC

REGISTER, JOHN FRANCIS ORS L
310 ROCKFORD ROAD 31 31 37
GREENSBORO 27401 919 274-0161
MED U OF SC

RENDALL, JOHN LLOYD, III ORS AC
108 KEMP ROAD, EAST 73 78 80
GREENSBORO 27410 919 275-6318
DUKE

SUE, SAMUEL ARTHUR, JR. ORS AC
PO BOX 14580 56 56 64
315 W. WENDOVER AVE.
GREENSBORO 27415 919 275-0724
BOWMAN GRAY

TROXLER, EULYSS ROBERT ORS L
2314 PRINCESS ANN ST. 38 47 48
GREENSBORO 27408 919 288-5521
DUKE

VOYTEK, ANNA ORS AC
1910 N. CHURCH ST. 83 84 89
GREENSBORO 27405 919 274-7273
U OF ROCHESTER

WAINER, ROBERT ALAN ORS AC
809 GREEN VALLEY RD. 84 85 89
GREENSBORO 27408 919 275-3325
U OF NC

WHITFIELD, PETER WHITE ORS AC
201 E. WENDOVER AVE. 74 76 81
GREENSBORO 27401 919 274-1957
GEO WASHINGTON U

YATES, MARK CHARLES ORS AC
1505 WESTOVER TERR. 82 88 88
GREENSBORO 27408 919 275-0927
MISSOURI U-KC

OTOLARYNGOLOGY

CROSSLEY, JAMES JOHN OTO /A AC
100 E. NORTHWOOD ST. 67 69 76
GREENSBORO 27401 919 274-5441
CORNELL U

INABNET, WILLIAM BARLOW OTO /PSF AC
100 E. NORTHWOOD STREET 58 64 64
GREENSBORO 27401 919 275-0507
LA STATE U

KRAUS, ERIC MARSHALL OTO /OT AC
1309 N. ELM ST. 77 77 84
GREENSBORO 27401 919 273-9932
U OF PITTSBURGH

LAWRENCE, ROBERT L. OTO /HNS AC
321 W.WENDOVER AVENUE 63 63 73
GREENSBORO 27408 919 379-9445
VANDERBILT U

LEE, J. GARY OTO /HNS AC
321 W. WENDOVER AVENUE 67 68 76
GREENSBORO 27408 919 379-9445
U OF IOWA

MUNDY, JOHN CHRISTIAN OTO C
1309 N. ELM ST. 75 81 90
GREENSBORO 27401 919 273-9932
U OF VIRGINIA

SARDI, CARL ANTHONY OTO /A L/RT
7100 BETHLEHEM CHURCH RD. 52 56 56
CLIMAX 27233 919 674-2509
TEMPLE U

WELLS, RHEUDOLPH JAMES OTO /PS AC
602 PASTEUR DRIVE 56 62 62
GREENSBORO 27403 919 292-5818
MED COLL OF VA

WOLICKI, KAROL T. OTO AC
321 W. WENDOVER AVE. 81 81 87
GREENSBORO 27408 919 379-9445
U OF VIRGINIA

PSYCHIATRY

BADAWI, RAOUF FAHMY P AC
522 N. ELAM AVE., STE. 203 63 73 81
GREENSBORO 27403 919 854-2391
CAIRO U

BODNER, WILLIAM RAYMOND, JR. P AC
606 WALTER REED DR. 63 72 73
GREENSBORO 27403 919 299-0107
ST LOUIS U

GRESALFI, THOMAS J., JR. P AC
606 WALTER REED DR. 83 85 88
GREENSBORO 27403 919 299-0108
COLUMBIA U

HEJAZI, MASOUD P /CHP AC
600 PASTEUR DR., STE. B 77 82 89
GREENSBORO 27403 919 299-0886

HENSCHEN, GARY MAYES P /PYA AC
606 WALTER REED DR. 75 75 73
GREENSBORO 27403 919 299-0108
U OF NC

HERTLE, XAVER FRANZ P AC
106 E. NORTHWOOD STREET 50 58 60
GREENSBORO 27401 919 275-1614
LUDWIG MAXIMILLI

41. GREATER GREENSBORO SOCIETY OF MEDICINE (Continued)

MORCOS, VICTOR HANNA P AC 64 73 81
522 N. ELAM AVE., STE. 203
GREENSBORO 27403 919 854-2391
EIN SHAMS U

RHOADS, EDWARD JOHN P /PYA AC 75 78 83
606 WALTER REED DR.
GREENSBORO 27403 919 299-0511
DUKE

SEELY, THOMAS J. P AC 81 82 87
606 WALTER REED DR.
GREENSBORO 27403 919 299-5400
U OF NC

VOGT, JOEL ALAN P AC 81 81 85
522 N. ELAM AVE., STE. 203
GREENSBORO 27403 919 854-2391
TEXAS A/M U

WANGELIN, ROBERT LESTER P AC 72 72 88
606 WALTER REED DR.
GREENSBORO 27403 919 299-5400
WEST VA U

WEISS, JOSEPH WALTON P AC 77 78 85
522 N. ELAM AVENUE, STE. 203
GREENSBORO 27403 919 854-2391
MED COLL OF OHIO

WHITENER, ROBERT WILFONG P AC 54 54 62
1024 PROFESSIONAL VILLAGE
GREENSBORO 27401 919 274-1250
NORTHWESTERN U

PEDIATRICS

BENBOW, EDWARD PERRY, JR. PD L 40 43 49
PO BOX 339
ORIENTAL 28571 919 299-7057
DUKE

BEST, JAMES ERNEST PD /ADL L/RT 45 45 48
600 PASTEUR DRIVE
GREENSBORO 27403 919 854-9023
BOWMAN GRAY

BOETTE,RICHARD WALTERS PD AC 66 66 84
515 COLLEGE RD., STE. 11
GREENSBORO 27410 919 852-9630
MED U OF SC

BRETT, CHARLES BURDEN PD AC 71 71 80
1307 W. WENDOVER AVENUE
GREENSBORO 27408 919 272-5189
U OF NC

CARLOS, RITA QUIAMBAO PD AC 82 87 90
1200 N. ELM ST.
GREENSBORO 27401 919 379-3963

FERGUSON, BILLY LEE PD AC 59 59 90
614 PASTEUR DR.
GREENSBORO 27403 919 292-8240
BOWMAN GRAY

FOLLO, PAIGE BILL PD AC 47 54 54
1209 MAGNOLIA STREET
GREENSBORO 27401 919 273-2879
HARVARD

JAROSAK, PETER JAMES PD AC 72 72 77
1307 W. WENDOVER AVE.
GREENSBORO 27408 919 275-6335
U OF MINN

JOHNSON, ANDREW MYRON PD AC 59 70 71
1200 N. ELM ST.
GREENSBORO 27401 919 379-4064
VANDERBILT U

KING, ANNE BRYSON PD AC 80 82 88
721 GREEN VALLEY RD.
GREENSBORO 27408 919 272-9447
U OF NC

LENTZ, ROBERT PRESTON PD AC 82 82 90
510 N. ELAM AVE., STE. 202
GREENSBORO 27403 919 299-3183
U OF NC

LITTLE, EDGAR WATSON PD AC 71 71 77
1307 W. WENDOVER AVE.
GREENSBORO 27408 919 275-8621
U OF NC

LOCKWOOD, MARILYN ANN PD /GP AC 64 64 78
C/O KRON MEDICAL CORP
725 AIRPORT ROAD
CHAPEL HILL 27514 800 633-4225
ST U OF NY-BUFF

LUCAS, KATHLEEN ELLEN PD AC 84 87 90
1307 W. WENDOVER AVE.
GREENSBORO 27401 919 272-2030
MARSHALL U

MOORE, WILLIAM LOCKE PD AC 52 52 56
616 PASTEUR DRIVE
GREENSBORO 27403 919 292-1353
HARVARD

PANOSH, WANDA KOTVAN PD /IM AC 78 82 84
ANNA GOVE HEALTH CENTER
UNC AT GREENSBORO
GREENSBORO 27412 919 334-5340
U OF PITTSBURGH

PASCALE, JAMES A. PD /NPM AC 72 72 88
3710 HAZEL LN.
GREENSBORO 27408 919 854-6115
BOWMAN GRAY

SHARPLESS, MARTHA KORNEGAY PD AC 59 59 69
1401 SUNSET DR.
GREENSBORO 27408 919 378-0633
U OF NC

SINGER, JAMES WILLARD PD AC 61 66 67
1209 MAGNOLIA STREET
GREENSBORO 27401 919 274-0106
OHIO STATE U

SMITH, DONALD DEWEY PD AC 60 61 67
1200 N. ELM ST.
GREENSBORO 27401 919 379-4025
DUKE

PEDIATRIC ALLERGY

BRATTON, TERESA SUE PDA /AI AC 74 76 82
1021 E. WENDOVER, STE. 302
GREENSBORO 27405 919 275-1318
VANDERBILT U

PEDIATRIC CARDIOLOGY

SCHALL, STEWART ALLAN PDC /PD AC 64 72 86
1200 N. ELM ST.
MOSES CONE MEM. HOSP.
GREENSBORO 27401 919 379-4060
U OF PENN

PEDIATRIC SURGERY

PENDSE, PRABHAKAR D. PDS /GS AC 59 60 72
1018 PROFESSIONAL VILLAGE
GREENSBORO 27401 919 272-6161
U OF BOMBAY

PHYSICAL MEDICINE AND REHABILITATION

BLOOM, MITCHELL JAY PM AC 84 89 90
1200 N. ELM ST.
GREENSBORO 27401 919 379-3667
AUTONOMA UNIV

HUBBELL, DAVID DONALD PM AC 85 88 90
5050 CAMERON FOREST PK
ALPHARETTA, GA 30201 919 373-0312
OHIO STATE U

PELLIGRA, SALVATORE JOHN PM AC 81 83 85
1200 N. ELM ST.
GREENSBORO 27401 919 379-3667
ALBANY MED COLL

PLASTIC SURGERY

BEST, DAVID CHARLES PS /HS AC 77 80 83
600 PASTEUR DR.
GREENSBORO 27403 919 852-0300
BOWMAN GRAY

GRAPER, ROBERT GORDON PS /GS AC 82 83 89
200 E. NORTHWOOD ST. #400
GREENSBORO 27401 919 275-0919
U OF CINCINNATI

HOLDERNESS, HOWARD, JR. PS /GS AC 65 65 8
200 E. NORTHWOOD ST., STE. 400
GREENSBORO 27401 919 275-091
U OF NC

KITCHENS, THOMAS RUSSELL PS AC 69 69 7
1507 WESTOVER TERR., SUITE A
GREENSBORO 27408 919 373-056
MED COLL OF GA

STINSON, HELEN MARIE PS 66 66 7
1021 E. WENDOVER AVE. STE. 303
GREENSBORO 27405 919 272-316
U OF TENNESSEE

TRUESDALE, GERALD LYNN PS /GS AC 75 79 8
901 N. ELM ST.
GREENSBORO 27401 919 274-275
U OF CHICAGO

PATHOLOGY, ANATOMICAL AND CLINICAL

ARRINGTON, JOHN HODGE, III PTH /DMP AC 67 67 7
1608 VALLEYMEDE
GREENSBORO 27410 919 379-407
TULANE U

BAIRD, HAYNES WALLACE PTH /CLP AC 69 69 7
1200 N. ELM STREET
GREENSBORO 27401 919 379-407
U OF NC

CAMPANO, MANUEL OSWALDO PTH AC 51 63 6
P. O. BOX X-3
GREENSBORO 27402 919 854-646
U OF HAVANA

FORREST, WILLIAM WOMBLE PTH S/RT 48 48 5
WESLEY LONG HOSPITAL
P. O. DRAWER X-3
GREENSBORO 27402 919 854-646
HARVARD

GAY, ROBERT MILTON PTH /CLP AC 63 63 7
1200 N. ELM STREET
GREENSBORO 27401 919 379-407
TULANE U

GROAT, RICHARD ARNOLD PTH L 52 52 5
702 W. CORNWALLIS DR.
GREENSBORO 27408 919 274-756
BOWMAN GRAY

HASSELL, CHARLES M., JR. PTH /DMP AC 58 58 6
1200 N. ELM STREET
GREENSBORO 27401 919 379-407
U OF PENN

LENNON, HERSHEL C. PTH L/RT 31 31 4
3504 FLINT ST. #C217
GREENSBORO 27405 919 545-012
U OF PENN

LEONARD, DONALD DEAN PTH /DMP AC 56 63 6
1200 N. ELM STREET
GREENSBORO 27401 919 379-407
CASE WESTERN RES

LUND, HERBERT ZACHAREUS PTH /D L 31 32 5
1200 N. ELM ST.
GREENSBORO 27401 919 379-407
U OF PENN

SCOTT, CORIDALIA WALD PTH AC 70 77 8
5400 CENTURY OAKS DR.
GREENSBORO 27405 919 854-645
U OF PANAMA

SHARPLESS, EDWARD ARTHUR PTH AC 61 61 6
DRAWER X-3
GREENSBORO 27402 919 854-646
U OF NC

STEUTERMAN, MARY CHRISTINE PTH AC 78 79 8
1200 N. ELM ST.
GREENSBORO 27401 919 379-407
ST LOUIS U

ZIRKER, THOMAS A. PTH AC 82 84 9
801 GREEN VALLEY RD.
GREENSBORO 27408 919 691-683
U TX-SOU.WESTERN

PULMONARY DISEASES

BONNER, MERLE DUMONT PUD /A L/RT 30 31 3
3504 FLINT ST., APT. D-121
GREENSBORO 27405 919 288-446
U OF MARYLAND

41. GREATER GREENSBORO SOCIETY OF MEDICINE (Continued)

HOPPER, WILLIAM FALCON PUD /IM AC
72 72 77
520 N. ELAM AVE.
GREENSBORO 27403 919 547-1700
WEST VA U

SLOTNICK, LAWRENCE SHELDON PUD /IM AC
70 72 78
802 GREEN VALLEY RD., STE. 210
GREENSBORO 27408 919 275-7238
DOWNSTATE ME CTR

STEVENS, ELLIOTT WALKER, JR. PUD /AI AC
66 66 73
1018 N. ELM STREET
GREENSBORO 27401 919 275-7238
U OF NC

YOUNG, CLINTON DRIVER PUD /A AC
74 74 81
1018 N. ELM STREET
GREENSBORO 27401 919 275-7238
U OF VIRGINIA

RADIOLOGY

CURNES, JOHN TAYLOR R /NR AC
78 78 86
PO BOX 13005
GREENSBORO RADIOLOGY ASSOC.
GREENSBORO 27415 919 379-4140
TULANE U

DOYLE, GREGORY WM. R AC
81 84 88
1013 PROFESSIONAL VILL.
GREENSBORO 27401 919 275-6481

FISHER, OTIS NORWOOD R AC
59 59 69
P. O. BOX 13005
GREENSBORO 27415 919 379-4360
U OF NC

JACKSON, FREEMAN RANDOLPH R AC
77 78 83
107 ELMWOOD TERRACE
GREENSBORO 27408 919 299-6815
MED COLL OF GA

PIERSON, GEORGE HERMAN, JR R /DR AC
54 54 73
P. O. BOX 13005
GREENSBORO 27415 919 379-4140
DUKE

SPANGLER, ERNEST BURTON R AC
52 59 62
DRAWER X-3
GREENSBORO 27402 919 854-6546
U OF PENN

WINTER, KENNETH HOWE R AC
75 75 81
3307 WALDRON DRIVE
GREENSBORO 27408 919 855-8972
U OF NC

RHEUMATOLOGY

ROWE, WILLIAM THOMAS RHU /IM AC
69 69 83
1511 WESTOVER TERRACE
GREENSBORO 27408 919 378-1461
U OF NC

RADIATION ONCOLOGY

MURRAY, ROBERT J., JR. RO AC
80 81 88
14 SOMMERTON DR.
GREENSBORO 27408 919 379-3878
U OF VIRGINIA

THERAPEUTIC RADIOLOGY

CHRYSTAL, GLENN STUART TR /ATP AC
83 88 89
604 WALTER REED DR.
GREENSBORO 27403 919 294-2670
GEO WASHINGTON U

GOODCHILD, NIGEL THOMAS TR AC
69 69 87
1200 N. ELM ST.
GREENSBORO 27401 919 379-4143
U OF LONDON

RABEN, MILTON TR
59 59 71
N. C. BAPTIST HOSPITAL
WINSTON-SALEM 27103 919 748-4981
TUFTS U

THORACIC SURGERY

LEE, JAMES MOBLEY TS AC
58 58 65
1317 N. ELM ST., STE. 1
GREENSBORO 27401 919 373-8245
DUKE

UROLOGICAL SURGERY

BRADLEY, HAROLD JOHN, JR. U AC
57 57 64
200 E. NORTHWOOD ST.
GREENSBORO 27401 919 378-9176
U OF NC

DAVIS, RONALD L., III U AC
81 87 87
200 E. NORTHWOOD ST., STE. 520
GREENSBORO 27401 919 275-6115
LA STATE U

EVANS, ROBERT JAMES U AC
82 83 90
408-A PARKWAY DR.
GREENSBORO 27401 919 274-1114
JEFFERSON

GARVEY, ALFRED HAMILTON U AC
54 54 61
200 E. NORTHWOOD ST., STE. 521
GREENSBORO 27401 919 275-6115
BOWMAN GRAY

GILBERT, GEORGE GAYLORD U L/RT
38 38 47
1517 DOUBLE OAKS RD.
GREENSBORO 27410 919 282-0168
JOHNS HOPKINS

HUMPHRIES, RALEIGH G. U AC
83 83 89
1025 PROFESSIONAL VILLAGE
GREENSBORO 27401 919 272-3962
U OF VIRGINIA

KIMBROUGH, HOUSTON MAGILL, JR. U /GS AC
72 72 78
1025 PROFESSIONAL VILLAGE
GREENSBORO 27401 919 272-3962
U OF VIRGINIA

NESI, MARC HENRY U AC
71 76 85
200 E. NORTHWOOD ST., STE. 206
GREENSBORO 27401 919 373-0871
U OF HAITI

PETERSON, LLOYD JOHN U AC
69 73 79
200 E. NORTHWOOD ST., STE. 520
GREENSBORO 27401 919 275-6115
NORTHWESTERN U

SURAL, RONALD FRANK U AC
67 68 75
1006 PROFESSIONAL VILLAGE
GREENSBORO 27401 919 373-8323
U OF MICHIGAN

TANNENBAUM, SIGMUND IAN U AC
75 76 83
408-A PARKWAY DR.
GREENSBORO 27401 919 274-1114
DUKE

WRENN, JOHN JEFFRIES U C
85 88 89
200 E. NORTHWOOD, STE. 302
GREENSBORO 27401 919 378-4176
U OF TENNESSEE

VASCULAR SURGERY

LAWSON, JAMES DOUGLAS VS /GS AC
74 75 82
1317 N. ELM ST., STE. 1
GREENSBORO 27401 919 373-8245
U OF TENNESSEE

42. HALIFAX COMPONENT SOCIETY

OFFICERS—**President:** Mahendra Patel, M.D., PO Box 158, Roanoke Rapids 27870 (919 537-0135)
Secretary: R. Prasad Degala, M.D., 1048 E. 10th St., Roanoke Rapids 27870 (919 535-2422)

ANESTHESIOLOGY

FLEMING, GEORGE EDWARD AN AC
64 64 88
PO BOX 190
ROANOKE RAPIDS 27870 919 535-8185
JEFFERSON

CARDIOVASCULAR DISEASES

ANTONY, JOSE KANDANATT CD /IM AC
79 81 87
306 BECKER DR.
PO BOX 1175
ROANOKE RAPIDS 27870 919 537-9268
U OF ROMA

DIAGNOSTIC RADIOLOGY

ELMORE, WILLIAM GLENN DR AC
68 68 75
P. O. BOX 249
ROANOKE RAPIDS 27870 919 535-2121
DUKE

WILLIAMS, RHODERICK THOMAS, JR DR AC
67 67 76
114 WOODLAND ROAD
ROANOKE RAPIDS 27870 919 535-2121
U OF NC

FAMILY PRACTICE

BLOWE, RALPH BOYD, SR. FP L
38 38 41
10 WEST 6TH STREET
WELDON 27890 919 536-3820
MED COLL OF VA

BOONE, JOHN WOODIE, JR. FP AC
51 51 54
120 PROFESSIONAL DRIVE
ROANOKE RAPIDS 27870 919 537-9176
BOWMAN GRAY

BURTON, ASHBY J., III FP AC
82 85 87
PO BOX 710
RICH SQUARE 27869 919 539-2082
EASTERN VA

BYRUM, GRAHAM VANCE FP AC
52 52 56
P. O. BOX 540
SCOTLAND NECK 27874 919 826-3143
BOWMAN GRAY

FRAZIER, RICHARD ELLIS FP AC
62 62 67
120 PROFESSIONAL DRIVE
ROANOKE RAPIDS 27870 919 537-9176
BOWMAN GRAY

KALDY, PATRICIA MARIE FP AC
80 80 77
104 MINA
ROANOKE RAPIDS 27870 919 535-4492
BOWMAN GRAY

STRANG, PAUL JOSEPH FP /EM C
66 67 78
102 CLEARFIELD CONDOS
ROANOKE RAPIDS 27870
U OF WISCONSIN

GENERAL PRACTICE

FUSSELL, FITZHUGH LEE, JR. GP AC
60 60 65
120 PROFESSIONAL DRIVE
ROANOKE RAPIDS 27870 919 537-9176
U OF NC

TAYLOR, THOMAS JEFFERSON GP L/RT
34 34 37
614 FRANKLIN ST.
ROANOKE RAPIDS 27870
JEFFERSON

WOOD, SHERROD NEWBERRY GP S/RT
50 50 52
424 BOND ST.
ENFIELD 27823 919 445-3263
JEFFERSON

GENERAL SURGERY

CACERES, MARCO ANTONIO GS /TS AC
63 71 76
PO BOX 458
ROANOKE RAPIDS 27870 919 537-6525
U OF HONDURAS

42. HALIFAX COMPONENT SOCIETY (Continued)

JARMAN, FONTAINE GRAHAM, JR. GS L/RT 43 52 52
12 LONGSTREET ROAD
WELDON 27890 919 536-2884
MED COLL OF VA

WIER, FRED EUGENE GS /VS AC 74 74 82
725-D HAMILTON ST.
ROANOKE RAPIDS 27870 919 572-3737
LOMA LINDA U

INFECTIOUS DISEASES

FIORILLI, MARIO GRAZIA ID /IM AC 71 74 81
220 SMITH CHURCH ROAD
ROANOKE RAPIDS 27870 919 535-3001
U DESACRO CUORC

INTERNAL MEDICINE

BROWN, WILLIAM LEE IM AC 61 61 71
PO DRAWER 158
ROANOKE RAPIDS 27870 919 537-0134
U OF NC

MANLAPAS, HECTOR CHAN IM AC 63 63 72
PO DRAWER 158
ROANOKE RAPIDS 27870 919 537-0135
U OF SANTO TOMAS

PANDARINATH, GUPTA IM /GE AC 72 75 78
PO DRAWER 158
ROANOKE RAPIDS 27870 919 537-0135
BANGALORE MED CO

PATEL, MAHENDRA S. IM /ON AC 76 79 85
PO DRAWER 158
ROANOKE RAPIDS 27870 919 537-0134
BARODA U

NEPHROLOGY

BERNARDO, DANILO REYES NEP /IM AC 78 83 89
PO BOX 220
ROANOKE RAPIDS 27870 919 535-2111
FAR EASTERN U

OBSTETRICS AND GYNECOLOGY

RAYNOR, B. DENISE OBG AC 84 85 89
103 BROOKSIDE CT.
ROANOKE RAPIDS 27870 919 536-2557
VANDERBILT U

OPHTHALMOLOGY

CHAUDHRY, HASHMAT ALI OPH AC 69 76 84
608 JACKSON ST.
ROANOKE RAPIDS 27870 919 537-0522
NISHTAR MED COLL

DEVILLA, AMADA RUIZ OPH AC 79 80 84
204 BECKER DR.
ROANOKE RAPIDS 27870 919 537-8193
U OF KENTUCKY

ORTHOPEDIC SURGERY

BISSRAM, GANESH ORS AC 72 81 85
130 CARDINAL DR.
ROANOKE RAPIDS 27870 919 535-3091
U OF WEST INDIES

OTOLARYNGOLOGY

POWER, BHASKAR DAYARAM OTO /A AC 57 58 84
PO BOX 1132
ROANOKE RAPIDS 27870 919 535-1411
U OF BOMBAY

PEDIATRICS

BHAGWANDASS, SHEILA SODHI PD AC 81 82 91
PO BOX 66
ROANOKE RAPIDS 27870 919 537-6465
KASTURBA U

RADIOLOGY

PIGGOTT, BERT CODY, JR. R C 85 86 90
107 STILL FOREST PL.
ROANOKE RAPIDS 27870 919 535-2121
U OF NC

RHEUMATOLOGY

BYRD, WILLIAM EUGENE RHU /IM AC 70 70 84
1724 E. 10TH ST.
PO BOX 1093
ROANOKE RAPIDS 27870 919 535-1082
U OF NC

UROLOGICAL SURGERY

SHANKER, KASTURI GIRIJA U AC 60 73 78
117 WEST SEVENTH STREET
ROANOKE RAPIDS 27870 919 537-0023
MADRAS MED COLL

43. HARNETT COMPONENT SOCIETY

OFFICERS—**President:** Lakshman Rao, M.D., 1107 Walnut Dr., Erwin 28339 (919 897-5591)
Secretary: Thomas L. Taylor, M.D., 116 Jones Dr., Dunn 28334 (919 892-4340)

ANESTHESIOLOGY

HOFFMAN, TED F., JR. AN AC 78 81 83
819 ORANGE HIGH SCHOOL RD.
HILLSBOROUGH 27278 919 470-6180
U OF NC

DIAGNOSTIC RADIOLOGY

TAYLOR, THOMAS LEE DR AC 53 53 72
116 JONES DRIVE
DUNN 28334 919 892-7161
CORNELL U

EMERGENCY MEDICINE

BROWN, DAVID HOUSTON EM /GER AC 76 81 88
PO BOX 399
BUIES CREEK 27506 919 893-5141
AUTONOMA UNIV

FAMILY PRACTICE

BLACKMON, BRUCE BERNARD FP AC 51 51 53
P. O. BOX 8
BUIES CREEK 27506 919 893-3543
BOWMAN GRAY

DOFFERMYRE, LUTHER RANDOLPH FP L 38 38 39
P. O. BOX 1011
DUNN 28334 919 892-4151
TEMPLE U

DUNCAN, STACY ALLEN, JR. FP AC 56 56 60
306 W. EDGERTON STREET
DUNN 28334 919 892-2151
U OF NC

MOORE, WILLIAM DONALD FP L 44 47 50
PO BOX 819
COATS 27521 919 897-6423
MED COLL OF VA

ROBINSON, LINDA MOORE FP AC 76 76 75
COATS MEDICAL CLINIC
PO BOX 819
COATS 27521 919 897-6423
U OF NC

SEDDON, JENNIFER L. FP AC 68 68 87
ROUTE #4, BOX 630
DUNN 28334 919 892-2103
U OF EDINBURGH

WILLIFORD, JOHN KENNETH FP AC 46 46 48
P. O. BOX 579
LILLINGTON 27546 919 893-3392
BOWMAN GRAY

GENERAL PRACTICE

ADAIR, WILLIAM EDWARD, JR. GP /GS L 38 38 41
P. O. BOX 578
ERWIN 28339 919 897-5521
TEMPLE U

WILSON, STEPHEN GLENN, SR. GP L/RT 30 30 32
P. O. BOX 158
ANGIER 27501 919 639-2574
MED COLL OF VA

GENERAL SURGERY

CHU, H. WILLY GS AC 83 88 90
700 TILGHMAN DR.
DUNN 28334 919 892-1550
DUKE

HANCOCK, RICHARD PAUL GS /TS AC 61 65 67
702 TILGHMAN DR.
DUNN 28334 919 892-8120
JOHNS HOPKINS

JOHNSON, GALE DENNING GS L/RT 44 44 47
910 W. POPE ST.
DUNN 28334 919 892-7893
JEFFERSON

INTERNAL MEDICINE

LOWE, BARBARA ANN IM AC 82 83 85
705 TILGHMAN DR.
DUNN 28334 919 000-0000
U OF NC

RAO, LAKSHMAN IM AC 83 84 89
518-B E. H STREET
ERWIN 28339 919 897-5591
U CIUDAD JUAREZ

VYAS, PANKAJ K. IM AC 82 82 88
109 S. RAILROAD ST.
PO BOX 667
BENSON 27504 919 894-5787
M S UNIV. BARODA

OBSTETRICS AND GYNECOLOGY

ZICH, MICHAEL JOHN OBG AC 75 77 84
608 TILGHMAN DR.
DUNN 28334 919 892-4092
U OF ILLINOIS

43. HARNETT COMPONENT SOCIETY (Continued)

SYCHIATRY

AMSELLEM, DAVID — P 73 AC 73 85
GOOD HOPE HOSPITAL
PO BOX 668, DENIM DR.
ERWIN 28339 — 919 897-6151
U OF MONTPELLIER

UROLOGICAL SURGERY

SEDDON, JOHN MICHAEL — U 67 AC 69 85
714 TILGHMAN DR.
DUNN 28334 — 919 892-1068
U OF EDINBURGH

44. HAYWOOD COMPONENT SOCIETY

OFFICERS—**President:** Nancy R. Freeman, M.D., Midway Medical Ctr., Canton 28716 (704 627-2211)
Secretary: Richard Bremer, M.D., 90 Hospital Dr., Clyde 28721 (704 456-7311)
Executive Secretary: Katherine Smith, 90 Hospital Dr., Clyde 28721 (704 452-8211)

ERMATOLOGY

MASTERS, MICHAEL JASON — D 75 AC 76 83
108 HOSPITAL DR.
CLYDE 28721 — 704 456-7343
HAHNEMANN

THOMAS, RUFUS M., JR. — D 78 AC 78 89
108 HOSPITAL DRIVE
CLYDE 28721 — 704 456-7343
TULANE U

IAGNOSTIC RADIOLOGY

BROWN, ALAN REID — DR 41 L 53 53
848 GOLFSIDE DR.
SEBRING, FL 33872
U OF MICHIGAN

MERGENCY MEDICINE

GILLIGAN, KENDALL ALLEN — EM 77 AC 77 82
109 ROBIN LANE
WAYNESVILLE 28786 — 704 456-7894
U OF CALIF-LA

AMILY PRACTICE

BROWN, GEORGE WALLACE — FP 54 AC 54 58
102 BROWN AVENUE
HAZELWOOD 28738 — 704 456-6021
U OF NC

FREEMAN, NANCY ROUSER — FP 82 AC 84 86
PO BOX 1409
CANTON 28716 — 704 627-2211
U OF NC

MATHEWS, HERSCHELL F. — FP /EM 60 AC 60 80
ROUTE #1, BOX 564
SYLVA 28779 — 704 586-8352
BOWMAN GRAY

MILLING, JAMES REAVES — FP 55 AC 55 81
718 BRUNSWICK DRIVE
WAYNESVILLE 28786 — 704 456-5566
MED U OF SC

STRINGFIELD, JAMES KING — FP 51 L/RT 51 53
331 BROWN AVE.
HAZELWOOD 28738
JEFFERSON

ASTROENTEROLOGY

NATHAN, HENRY PAUL — GE /IM 77 AC 77 83
102 HOSPITAL DRIVE
CLYDE 28721 — 704 452-0331
ALBERT EINSTEIN

ENERAL PRACTICE

MORRISON, FRANK CRAWFORD — GP 55 AC 55 58
P. O. BOX 1549, MEDICAL BLDG.
CANTON 28716 — 704 648-5215
U OF NC

OWEN, WILLIAM BOYD — GP 42 L 42 46
PO BOX 780
OWEN-SMITH CLINIC, PA
WAYNESVILLE 28786 — 704 456-8601
U OF PENN

GENERAL SURGERY

BRASWELL, WILLIAM KELLEY — GS /TS 77 AC 78 81
MIDWAY MEDICAL CENTER
P. O. BOX 1409
CANTON 28716 — 704 627-2211
U OF MIAMI

CAMP, EDWARD HAYS — GS 39 L/RT 50 51
112 BALSAM DRIVE
WAYNESVILLE 28786 — 704 456-9858
U OF CHICAGO

DICKERSON, ANDREW JACKSON — GS /TS 48 L/RT 49 55
110 WAYNEWOOD DR.
WAYNESVILLE 28786 — 704 456-5002
BOWMAN GRAY

SHARPTON, BENNIE REEVES — GS 71 AC 73 80
106 BROADVIEW RD.
WAYNESVILLE 28786 — 704 456-8633
MED COLL OF GA

WENZEL, FREDERICK GEORGE — GS 59 AC 66 66
102 HOSPITAL DR., STE. 12
CLYDE 28721 — 704 456-8624
NORTHWESTERN U

INTERNAL MEDICINE

STEVENS, HUGH L. C. — IM /GE 46 RT 46 72
601 GREEN VIEW DR.
WAYNESVILLE 28786 — 704 452-5124
TEMPLE U

NEUROLOGY

MCKINNEY, ALEXANDER STUART — N 59 AC 60 85
102 HOSPITAL DR.
CLYDE 28721 — 704 452-0331
COLUMBIA U

NEUROLOGICAL SURGERY

MAHALEY, MOSES STEPHEN, JR. — NS 59 RT 59 65
PO BOX 1063
MAGGIE VALLEY 28751 — 704 926-6313
DUKE

OBSTETRICS AND GYNECOLOGY

PETERSON, ROBERT L.,JR. — OBG 82 AC 83 86
26 HOSPITAL DR.
CLYDE 28721 — 919 332-8109
U OF NC

OPHTHALMOLOGY

NERNEY, JOHN JOSEPH — OPH 70 AC 71 78
116 HOSPITAL DRIVE
CLYDE 28721 — 704 452-5816
MED COLL OF GA

ROGERS, TED — OPH 67 AC 67 73
79 PARAGON PARKWAY
CLYDE 28721 — 704 456-9423
U OF NC

ORTHOPEDIC SURGERY

HARLEY, STEWART JACQUES — ORS 69 AC 69 77
114 HOSPITAL DRIVE
CLYDE 28721 — 704 452-2218
U OF MICHIGAN

OWEN, WILLIAM BOYD, JR. — ORS 71 AC 71 78
106 GALLOWAY STREET
WAYNESVILLE 28786 — 704 452-2207
BOWMAN GRAY

OTOLARYNGOLOGY

TANNEHILL, JOHN FRANKLIN — OTO /HNS 64 AC 64 77
120 HOSPITAL DRIVE
CLYDE 28721 — 704 452-1406
TULANE U

PEDIATRICS

EARNEST, ROBERT RHEA — PD /ADL 68 AC 69 74
102 HOSPITAL DR.
CLYDE 28721 — 704 452-2211
EMORY U

MAHARAJH, GARNET D. — PD 85 AC 87 89
102 HOSPITAL DR.
CLYDE 28721 — 704 242-2211
BOWMAN GRAY

WALL, STEPHEN JAY — PD 86 AC 87 89
102 HOSPITAL DR.
CLYDE 28721 — 704 452-2211
U OF TX-HOUSTON

PUBLIC HEALTH

ROBERSON, ROBERT STUART — PH 30 L 30 30
305 GRIMBALL DR.
HAZELWOOD 28738 — 704 456-3662
MED COLL OF VA

PULMONARY DISEASES

LIPHAM, HARRY GLENN — PUD 76 AC 76 81
102 HOSPITAL DR.
CLYDE 28721 — 704 452-0331
BOWMAN GRAY

RADIOLOGY

GEHWEILER, JOHN ANDREW, JR. — R 56 AC 56 68
421 RIDGE RD.
WAYNESVILLE 28786 — 704 452-1517
DUKE

RHEUMATOLOGY

QUEEN, KATE TAYLOR — RHU /IM 81 AC 84 86
102 HOSPITAL DR.
CLYDE 28721 — 704 452-0331
U OF NC

45. HENDERSON COMPONENT SOCIETY

OFFICERS—**President:** Marty Black, M.D., 715 Fleming St., Hendersonville 28739 (704 696-1040)
Secretary: David Katz, M.D., PO Box 267, Brevard 28712 (704 885-5837)

ANESTHESIOLOGY

BELL, JOHN DAVIS AN AC
401 SIXTH AVE., WEST 72 72 77
HENDERSONVILLE 28739 704 693-9669
U OF NC

HAMMONDS, MAX WAYNE AN AC
334 BROOKSIDE CAMP RD. 68 69 90
HENDERSONVILLE 28792 704 692-8688
INDIANA U

IRVING, RICHARD CARROLL AN /GER L/RT
355 ORCHARD CIR. 41 57 58
HENDERSONVILLE 28739 704 692-9806
DUKE

KEPPLER, C. BURTON AN AC
334 BROOKSIDE CAMP RD. 65 66 86
HENDERSONVILLE 28792 704 692-8688
LOMA LINDA U

LUTZ, JAMES DWIGHT AN L/RT
235 ESTATE DR. 45 48 49
HENDERSONVILLE 28739 704 693-9669
DUKE

PARKER, PAUL EDWIN AN C
401 SIXTH AVE., WEST 86 86 86
HENDERSONVILLE 28739 704 693-9669
EASTERN VA

CARDIOVASCULAR DISEASES

BAILEY, ROYCE K. CD AC
PO BOX 217 80 81 87
NAPLES 28760 704 684-1046
LOMA LINDA U

GOODFIELD, PETER CD AC
510 7TH AVENUE, WEST 79 80 86
HENDERSONVILLE 28739 704 692-2231
NEW YORK U

DERMATOLOGY

GODEHN, DONALD JOHN, JR., D AC
506 PARK HILL CT., STE. #1 72 75 77
HENDERSONVILLE 28739 704 693-0275
BOWMAN GRAY

DIAGNOSTIC RADIOLOGY

BLACK, MARTIN L. DR AC
PARDEE HOSPITAL 80 83 88
HENDERSONVILLE 28739 704 696-1040
U OF VERMONT

CALDEMEYER, JOHN EVERETT DR AC
807 JUSTICE ST. 78 78 85
HENDERSONVILLE 28739 704 693-1441
INDIANA U

EMERGENCY MEDICINE

BLAKELY, GENE THORNTON EM AC
MARGARET PARDEE HOSPITAL 54 54 70
HENDERSONVILLE 28739 704 693-6522
TULANE U

NERNESS, JOHN LAVON EM AC
RT. #11, BOX 134 63 64 74
HENDERSONVILLE 28792 704 693-0736
LOMA LINDA U

THORESEN, F. D. EM /FP AC
1801 ASHEVILLE HIGHWAY 59 59 70
HENDERSONVILLE 28739 704 696-0545
LOMA LINDA U

WALL, ANTOINETTE WILKES EM AC
PO BOX 1004 72 73 77
SKYLAND 28776
U OF MIAMI

WYMAN, JOHN SHELDON EM /IM RT
715 FLEMING ST. 36 36 74
HENDERSONVILLE 28739 704 693-6522
U OF MICHIGAN

FAMILY PRACTICE

BAILEY, ROBERT WOODWARD FP AC
611 FIFTH AVE. WEST 83 84 80
HENDERSONVILLE 28739 704 697-1508
EAST CAROLINA U

BAKER, EDGAR FP AC
510-A FLEMING STREET 62 66 67
HENDERSONVILLE 28739 704 693-9973
U OF TENNESSEE

BURCH, WILLIAM HOBART FP AC
BOX 285, HARRIS RD AND 74 50 53 54
LAKE LURE 28746 704 625-9121
CASE WESTERN RES

CLINTON, HOWARD LESLIE, JR. FP /EM AC
PO BOX 1477 73 74 79
HENDERSONVILLE 28793 704 697-6991
EMORY U

CRANE, STEVEN DOUGLAS FP AC
PO BOX 5151 83 83 89
HENDERSONVILLE 28739 704 693-4289
CASE WESTERN RES

KIRKLEY, MARGARET ANNE FP AC
518 SIXTH AVENUE, WEST 68 71 76
HENDERSONVILLE 28739 704 697-7805
U OF EDINBURGH

KRUM, RONALD EUGENE FP AC
P. O. BOX 5420 60 60 70
FLETCHER 28732 704 687-1416
LOMA LINDA U

PORTER, RICHARD ALLISON FP L/RT
1107 WOODMONT DR. 43 47 48
HENDERSONVILLE 28739
CASE WESTERN RES

STRICKLAND, WILLIAM HERMAN,JR. FP AC
510 FLEMING STREET 54 54 57
HENDERSONVILLE 28739 704 692-8410
BOWMAN GRAY

TRYON, RANDY JOE FP AC
2305 ASHEVILLE HIGHWAY 81 83 90
HENDERSONVILLE 28739 704 692-7122

VEAZEY, ALEX H., JR. FP RT
1228 CHANTELOUP DR. 51 51 56
HENDERSONVILLE 28739 704 693-6124
U OF PENN

GENERAL PRACTICE

HOPKINS, RICHARD GLENN GP AC
PO BOX 770, WALKER ST. 55 56 83
COLUMBUS 28722 704 894-8266
U OF MICHIGAN

GENERAL SURGERY

ALBERS, CHARLES ALLEN GS AC
835 FLEMING STREET 76 76 82
HENDERSONVILLE 28739 704 692-0238
BAYLOR

FALVO, SAMUEL CATANZARO GS /CRS AC
511 SIXTH AVENUE, WEST 52 59 59
HENDERSONVILLE 28739 704 693-9566
GEORGETOWN U

GLASSMAN, STUART LEWIS GS /VS AC
835 FLEMING ST. 73 73 87
HENDERSONVILLE 28739 704 692-1191
U OF MIAMI

GLENN, DAVID LOCKE, JR. GS AC
561 FLEMING ST. 76 76 85
HENDERSONVILLE 28739 704 693-1778
MED U OF SC

HUFFMAN, ALLAN DAY GS /VS AC
561 FLEMING ST. 83 84 89
HENDERSONVILLE 28739 704 693-1778
U OF ALABAMA

KRISHINGNER, GENE LAVERE GS AC
ROUTE #8, BOX 81-A 65 65 76
HENDERSONVILLE 28739 704 693-1729
LOMA LINDA U

MOORE, PIERCE JONES, JR GS
#1 P.J.'S PLACE 44 47 5
HENDERSONVILLE 28792 704 687-035
LOMA LINDA U

SANDBORN, WILLIAM DEAL GS AC
P. O. BOX 5400 65 67 7
FLETCHER 28732 704 687-141
LOMA LINDA U

SHEALY, FRED GRAY, JR. GS /VS AC
561 FLEMING STREET 72 72 7
HENDERSONVILLE 28739 704 693-177
MED U OF SC

STRANGE, JOHN NELSON, JR. GS /VS AC
561 FLEMING ST. 77 77 8
HENDERSONVILLE 28739 704 693-177
U OF MISSISSIPPI

INTERNAL MEDICINE

ALEXANDER, WILLIAM MCKINLEY IM L/R
P. O. BOX 627 45 49 5
HENDERSONVILLE 28739 704 692-346
MED U OF SC

BENTSON, EDWARD KEITH IM AC
559 N. JUSTICE ST. 81 87 8
HENDERSONVILLE 28739 704 696-816
BUENOS AIRES U

BRABHAM, FELICIA B. IM AC
518 SIXTH AVE. WEST 84 85 8
HENDERSONVILLE 28739 704 697-780
MED U OF SC

BUSH, RONALD EARL IM
PO BOX 537 67 68 0
ARDEN 28704 704 684-001
LOMA LINDA U

CASERIO, JAMES JOSEPH IM AC
547 N. JUSTICE ST. 78 79 8
HENDERSONVILLE 28739 704 692-509
U OF PITTSBURGH

COSGROVE, KENNETH EDWARD IM /CD L
510 7TH AVENUE, WEST 46 53 5
HENDERSONVILLE 28739 704 692-223
NEW YORK U

DRENNING, DAVID HUMPHREY IM AC
1307 BEVERLY DR. 86 89 8
RICHMOND, VA 23229 704 692-353
U OF TENNESSEE

HELPPIE, JOANNE E. IM AC
708-D FLEMING 83 84 8
HENDERSONVILLE 28739 704 693-656
U OF MICHIGAN

HILL, PAUL EDWARD IM /FP AC
559 N. JUSTICE STREET 54 54 5
HENDERSONVILLE 28739 704 692-058
DUKE

HOWELL, HOWARD SCOTT IM C
510 W. 7TH AVENUE 87 87 9
HENDERSONVILLE 28739 704 692-223
OHIO STATE U

HOWELL, KATHLEEN COULING IM C
510 7TH AVE. WEST 87 90 9
HENDERSONVILLE 28739 704 692-223
OHIO STATE U

KIRKLEY, SIDNEY EUGENE IM AC
518 SIXTH AVENUE, WEST 66 66 7
HENDERSONVILLE 28739 704 697-780
MED U OF SC

POSSINGER, CLIVE FRANCIS, JR. IM AC
P. O. BOX 217 65 65 7
NAPLES 28760 704 684-103
LOMA LINDA U

PYLES, JERALD DENNIS IM AC
510 7TH AVENUE, WEST 74 77 7
HENDERSONVILLE 28739 704 692-223
DUKE

ROMEO, BRUCE WALTON IM AC
501 6TH AVE. WEST 82 83 9
HENDERSONVILLE 28739 704 693-348
U OF SOU ALA

45. HENDERSON COMPONENT SOCIETY (Continued)

OMEO, BRUNO JOSEPH — IM /NM L
501 SIXTH AVENUE, WEST — 42 51 53
HENDERSONVILLE 28739 — 704 693-3483
NEW YORK U

ACCO, RUSSELL JOHN — IM /GER AC
506 PARK HILL COURT — 47 48 76
HENDERSONVILLE 28739 — 704 692-3538
ST U OF NY-BUFF

ELLERS, PHILLIP ALAN — IM AC
510 7TH AVENUE, WEST — 57 57 64
HENDERSONVILLE 28739 — 704 692-2231
BOWMAN GRAY

UROLOGICAL SURGERY

VEADON, PRESTON STENZ — NS RT
475 KING WILLIAM ROAD — 41 51 82
HENDERSONVILLE 28739 — 704 697-6857
CORNELL U

BSTETRICS AND GYNECOLOGY

)ENNISON, HERBERT EUGENE — OBG AC
630 FIFTH AVENUE, WEST — 61 68 68
HENDERSONVILLE 28739 — 704 692-2258
U OF MICHIGAN

LLIS, DAVID A. — OBG AC
630 5TH AVE. WEST — 83 83 87
HENDERSONVILLE 28739 — 704 692-2258
TULANE U

OVE, DAVID EUGENE — OBG AC
513 N. JUSTICE ST. — 65 65 72
HENDERSONVILLE 28739 — 704 687-0122
LOMA LINDA U

ROSS, JOHN MARION — OBG AC
630 FIFTH AVENUE, WEST — 55 55 63
HENDERSONVILLE 28739 — 704 692-2258
MED U OF SC

CCUPATIONAL MEDICINE

KATZ, DAVID STEWART — OM /GP AC
E. I. DUPONT — 80 82 89
PO BOX 267
BREVARD 28712 — 704 885-5837
DOWNSTATE ME CTR

PHTHALMOLOGY

CRAWFORD, JOHN LITTLEFIELD,III — OPH AC
1701 OLD VILLAGE ROAD — 74 74 71
HENDERSONVILLE 28739 — 704 693-1773
BOWMAN GRAY

GLEATON, HUGH ELBERT, JR. — OPH AC
643 FIFTH AVENUE, WEST — 65 65 73
HENDERSONVILLE 28739 — 704 692-9146
MED COLL OF GA

SHETTERLY, ROGER DAVIS — OPH AC
1027-B FLEMING STREET — 67 67 75
HENDERSONVILLE 28739 — 704 693-4161
U OF CINCINNATI

VAN KIRK, MARION P. — OPH AC
1701 OLD VILLAGE RD. — 83 83 87
HENDERSONVILLE 28739 — 704 693-1773
U TX-SAN ANTONIO

ORTHOPEDIC SURGERY

BROWN, FRANK MAC — ORS AC
1027 FLEMING STREET — 63 74 82
HENDERSONVILLE 28739 — 704 692-5781
LOMA LINDA U

EATON, ROBERT FARRELL — ORS AC
1027 FLEMING STREET — 66 66 76
HENDERSONVILLE 28739 — 704 692-5781
LA STATE U

FRANCIS, ROBERT DEAN — ORS /HS AC
1027 FLEMING STREET — 77 78 84
HENDERSONVILLE 28739 — 704 692-5781
DUKE

MACKEL, DAVID FREDERICK — ORS AC
1027 FLEMING STREET — 74 74 83
HENDERSONVILLE 28739 — 704 692-5781
INDIANA U

MCCONNACHIE, CHARLES CHRIS. — ORS H
1027 FLEMING STREET — 61 61 73
HENDERSONVILLE 28739
U OF LONDON

OTOLARYNGOLOGY

HAWK, RODNEY JAMES — OTO AC
512 PARK HILL CT. — 70 71 77
HENDERSONVILLE 28739 — 704 693-0706
U OF PITTSBURGH

PSYCHIATRY

ANDREWS, THOMAS J. — P AC
1612 ASHEVILLE HWY, STE. 4 — 79 80 86
HENDERSONVILLE 28739 — 704 697-2673
LOMA LINDA U

BURCH, LARRY THOMAS — P AC
GLASSY MOUNTAIN DR. — 64 65 77
PO BOX 160
FLAT ROCK 28731 — 704 692-4900
U OF MICHIGAN

PEDIATRICS

ELLISTON, WINSTON LEON — PD
738 SIXTH AVE. W. — 73 74 00
HENDERSONVILLE 28739 — 704 692-6615
LOMA LINDA U

RAIFORD, FLETCHER LINDSAY — PD L
1023 FOREST HILL RD. — 41 51 51
HENDERSONVILLE 28739 — 704 693-3296
MED COLL OF VA

VOLK, JAMES VICTOR — PD AC
FLETCHER MEDICAL CENTER — 72 75 86
FLETCHER 28732 — 704 693-3296
BOWMAN GRAY

PATHOLOGY, ANATOMICAL AND CLINICAL

DOWDESWELL, ROBERT HORTON — PTH AC
735 SIXTH AVE., WEST — 70 70 78
HENDERSONVILLE 28739 — 704 697-6781
MED U OF SC

LATOURETTE, KENNETH ABRAM — PTH L/RT
P. O. BOX 177 — 39 39 55
FLAT ROCK 28731 — 704 692-1641
NEW YORK U

SIGMON, LEE MERRELL — PTH /DMP AC
121 TIMBER CREEK ROAD — 72 73 81
HENDERSONVILLE 28739 — 704 693-6522
MED U OF SC

RADIOLOGY

SPENGLER, JOHN ROBERT — R AC
104 ROCKY TOP DR. — 53 65 66
HENDERSONVILLE 28739 — 704 692-7534
ST LOUIS U

UROLOGICAL SURGERY

DUNN, JACK NEWTON — U AC
807 BARBARA BLVD. — 60 60 72
HENDERSONVILLE 28739 — 704 692-2197
MED U OF SC

KRAEBBER, DAVID M. — U AC
404 8TH AVE., WEST — 81 81 00
HENDERSONVILLE 28739 — 704 693-5083
MED COLL OF GA

SMOLOWITZ, EDWIN LARRY — U AC
735 6TH AVE. WEST — 75 76 84
HENDERSONVILLE 28739 — 704 697-0527
MED COLL OF VA

THOMAS, COLIN EDWARD — U AC
512 SIXTH AVENUE, WEST — 67 67 74
HENDERSONVILLE 28739 — 704 692-6262
LA STATE U

WILLIAMS, DAVID R. — U AC
512 6TH AVE. WEST — 82 83 88
HENDERSONVILLE 28739 — 704 692-6262
U OF SOU ALA

40. HIGH POINT MEDICAL SOCIETY

OFFICERS—**President:** Warren Gallemore, M.D., PO Box 5094, High Point 27262 (919 841-2114)
Secretary: J. Keith Miller, M.D., 606 N. Elm St., High Point 27262 (919 889-8877)
Executive Director: James H. Busick, 1403 Sunset Dr., Ste. Two, Greensboro 27408 (919 889-4220)

LLERGY

BARDELAS, JOSE ANTONIO, JR. — A /PD AC
100 WESTWOOD AVE. — 73 75 77
HIGH POINT 27262 — 919 883-1393
JOHNS HOPKINS

NESTHESIOLOGY

ROBERSON, VIRGIL ODELL, III — AN AC
502 LINDSAY ST. — 71 71 77
PO BOX 2324
HIGH POINT 27261 — 919 882-2567
U OF NC

CARDIOVASCULAR DISEASES

CHEEK, HERMAN BARRETT — CD AC
624 QUAKER LANE — 83 84 90
HIGH POINT 27262 — 919 885-6168
BOWMAN GRAY

CROWELL, CHARLES CARLOS, III — CD /IM AC
624 QUAKER LN., STE. 103-C — 72 72 77
HIGH POINT 27262 — 919 885-6168
BOWMAN GRAY

ERDIN, ROBERT ALEXANDER, JR. — CD /IM AC
624 QUAKER LN., STE. E-200 — 73 75 78
HIGH POINT 27262 — 919 885-6168
MED COLL OF GA

DERMATOLOGY

DRAELOS, ZOE DIANA — D AC
1311 COUNTRY CLUB DR. — 83 87 87
HIGH POINT 27262 — 919 887-3195
U. OF ARIZONA

GILL, KENNETH ARNOLD, JR. — D /DMP AC
624 QUAKER LN,STE,302,BLDG B — 58 58 69
HIGH POINT 27262 — 919 887-3195
MED COLL OF VA

JENNINGS, ROYAL GREEN — D AC
624 QUAKER LANE, SUITE 302-B — 45 46 54
HIGH POINT 27262 — 919 887-3195
BOWMAN GRAY

40. HIGH POINT MEDICAL SOCIETY (Continued)

KIRBY, SAMUEL CRAIG D AC
624 QUAKER LN.,STE. 302,BLDG.B 82 83 87
HIGH POINT 27262 919 887-3195
EAST CAROLINA U

MARKHAM, ROBERT WADE D AC
624 QUAKER LANE, SUITE 302-B 63 63 71
HIGH POINT 27262 919 887-3195
DUKE

UHLIN, STEPHEN RICHARD D /IM AC
624 QUAKER LANE, 302-B 70 70 78
HIGH POINT 27262 919 885-8333
OHIO STATE U

DIAGNOSTIC RADIOLOGY

MARTIN, WELLS, III DR AC
HIGH POINT REGIONAL HOSPITAL 76 79 83
DEPT. OF RADIOLOGY
HIGH POINT 27260 919 884-6037
U OF CINCINNATI

WOODRUFF, WILLIAM WALTER, III DR AC
PO BOX 5007 82 83 84
HIGH POINT 27262 919 884-6037
DUKE

EMERGENCY MEDICINE

BREWER, THOMAS E., JR. EM /GP C
2807 EARHLAM PLACE 83 84 00
HIGH POINT 27263 919 724-9455
BOWMAN GRAY

BRIGMAN, PAUL HAMER EM L
2807 EARLHAM PLACE 54 54 55
HIGH POINT 27263 919 434-4007
U OF NC

GRAEUB, CHARLES M., JR. EM AC
2125 LAURA LANE 81 82 87
HIGH POINT 27262 919 454-4801
MED COLL OF GA

FAMILY PRACTICE

AVERETT, LELAND STANLEY, JR. FP AC
204 BOULEVARD ST. 54 54 55
HIGH POINT 27262 919 882-1324
U OF NC

BICKLEY, SAMUEL TAYLOR FP AC
P. O. BOX 5168 61 61 63
HIGH POINT 27262 919 885-2118
BOWMAN GRAY

CHUNG, ZUN SUB FP /EM AC
2926 S. MAIN STREET 65 75 76
HIGH POINT 27263 919 434-3118
KOREA U

ROBINSON, JAMES THOMAS, JR. FP AC
1124 E. LEXINGTON AVENUE 55 55 58
HIGH POINT 27262 919 882-1606
MED COLL OF VA

SLATE, MARVIN LONGWORTH FP L/RT
607 HUNTINGTON DR. 31 31 34
HIGH POINT 27262 919 883-9756
U OF MARYLAND

GASTROENTEROLOGY

DRAELOS, MICHAEL T. GE AC
624 QUAKER LN. STE. C-100 82 83 89
HIGH POINT 27262 919 885-8158
U. OF ARIZONA

HURRELBRINK, LESTER E., III GE /IM AC
624 QUAKER LN., STE. C-103 81 82 89
HIGH POINT 27262 919 885-8159
LA STATE U

REEDER, ALTON ALFRED GE /IM AC
624 QUAKER LN., STE. C-103 62 62 76
HIGH POINT 27262 919 885-8159
U OF NC

GENERAL SURGERY

BIESECKER, GARY LEROY GS AC
624 QUAKER LN., STE. C-101 68 68 77
HIGH POINT 27262 919 883-1348
U OF NEBRASKA

BLAZEK, F. DOUGLAS GS /ABS AC
624 QUAKER LN., STE. C-101 83 84 88
HIGH POINT 27262 919 883-1348
JEFFERSON

CANIPE, TOMMIE LEE GS /TS AC
P. O. BOX 5229 59 59 67
HIGH POINT 27262 919 887-3164
BOWMAN GRAY

CARR, RAYMOND EDWARD GS /TS AC
624 QUAKER LN., STE. C-101 62 73 75
HIGH POINT 27262 919 883-1348
ALBANY MED COLL

CULLOM, JOSEPH WILLIAM GS AC
624 QUAKER LN., STE. 200-C 73 73 84
PO BOX 5229
HIGH POINT 27262 919 887-3164
MED U OF SC

DOUGLASS, DONALD PERRY GS /TS AC
401 WESTWOOD AVENUE 53 53 61
HIGH POINT 27262 919 887-4066
BOWMAN GRAY

HOWELL, HARRY SLADE, JR. GS /VS AC
624 QUAKER LANE, SUITE 116-B 68 68 76
HIGH POINT 27262 919 886-4552
BOWMAN GRAY

INGRAM, CHARLES HAL GS L/RT
229 CASCADE DR. 43 43 49
HIGH POINT 27260 919 886-4552
U OF MARYLAND

NEWELL, ROBERT B. GS /EM L/RT
508 NEPTUNE DR. 36 36 57
CAPE CARTERET
SWANSBORO 28584 919 393-6417
ST U OF NY-BUFF

SHULL, KENNETH CASTLES GS /CDS AC
P. O. BOX 5229 73 74 79
HIGH POINT 27262 919 887-3164
MED U OF SC

WILLIAMS, LAWRENCE D. GS AC
624 QUAKER LN., STE. 116B 82 83 88
HIGH POINT 27262 919 886-4552
BOWMAN GRAY

GYNECOLOGY

CROSS, ROBERT VANDERVOORT GYN L/RT
P. O. BOX 5128 47 53 53
HIGH POINT 27262 919 887-3011
U OF PITTSBURGH

FLETCHER, RICHARD VAN, JR. GYN AC
721 N. ELM ST., STE. 102 74 74 86
HIGH POINT 27262 919 889-8900
VANDERBILT U

INTERNAL MEDICINE

AUMAN, EDWIN LEWIS IM AC
624 QUAKER LANE, SUITE 210-A 55 55 61
HIGH POINT 27262 919 841-8822
BOWMAN GRAY

CHILES, NOAH HAMPTON IM L/RT
PO BOX 22548 44 48 56
HILTON HEAD ISLAND, SC 29925 919 882-3911
U OF LOUISVILLE

COX, RONNIE LEWIS IM /CD AC
624 QUAKER LANE 61 61 70
HIGH POINT 27262 919 841-6711
DUKE

FLYTHE, WILLIAM HENRY IM L
201 GREENSBORO RD., BOX 212 33 33 37
HIGH POINT 27260 919 882-8933
VANDERBILT U

FORTNEY, AUSTIN POWELL IM AC
P. O. BOX 579 46 51 52
JAMESTOWN 27282 919 454-3151
EMORY U

GALLEMORE, WARREN GHOLSON IM AC
P. O. BOX 5904 75 76 7
HIGH POINT 27262 919 841-211
MED COLL OF GA

HUNT, WILLIAM JACK IM L
1605 HEATHGATE PL. 43 43 4
HIGH POINT 27262 919 882-981
U OF MARYLAND

JARRETT, THOMAS EDWARD IM AC
624 QUAKER LANE, #205A 78 78 8
HIGH POINT 27262 919 841-671
MED U OF SC

MANDEL, LEE RICHARD IM AC
707-E W. MAIN ST. 76 76 8
PO BOX 2098
JAMESTOWN 27282 919 454-315
U OF MIAMI

MILLER, IRA BEN IM AC
1312 LONG ST., STE. 103 46 46 5
HIGH POINT 27262 919 884-588
BOWMAN GRAY

PARKS, WILLIAM CRAIG IM L
624 QUAKER LANE, SUITE 207-A 38 38 4
HIGH POINT 27262 919 841-423
MED U OF SC

POLLOCK, NELSON EARL IM AC
P. O. BOX 5904 75 77 7
HIGH POINT 27262 919 841-211
MED COLL OF GA

REID, WILLIAM KIRKPATRICK IM /ON AC
507 LINDSAY ST. 81 81 9
HIGH POINT 27262 919 883-002
U OF NC

ROSTAND, ROBERT ALTON IM /PUD AC
624 QUAKER LN., STE. C-100 72 74 7
HIGH POINT 27262 919 882-725
TUFTS U

RUEHLE, STEPHEN SAMUEL IM AC
624 QUAKER LANE 76 76 8
HIGH POINT 27262 919 841-423
OHIO STATE U

SMITH, LAFAYETTE LYLE IM AC
624 QUAKER LANE, SUITE 213-B 72 73 7
HIGH POINT 27262 919 883-413
MED U OF SC

TERRELL, SARA ELDORA HAWORTH IM AC
624 QUAKER LN. STE. 207-C 53 53 5
HIGH POINT 27262 919 841-423
DUKE

TERRELL, THOMAS EUGENE IM AC
624 QUAKER LN., STE. 207-C 53 53 5
HIGH POINT 27262 919 885-321
DUKE

WILLIFORD, SUSAN ANN KIDWELL IM /ON AC
810 LINDSAY ST. 84 84 9
HIGH POINT 27262 919 841-211
BOWMAN GRAY

NEUROLOGY

FORD, C. STEPHEN N AC
624 QUAKER LN., STE. 206C 79 83 8
HIGH POINT 27262 919 885-242
MED U OF SC

FRANK, JEFFREY H. N AC
606 N. ELM ST. 81 83 8
HIGH POINT 27262 919 889-887
U OF KENTUCKY

HAWORTH, CHESTER CARL, JR. N /IM AC
624 QUAKER LANE, SUITE 211-B 63 63 7
HIGH POINT 27262 919 889-149
DUKE

MILLER, JOSEPH KEITH N AC
606 N. ELM ST. 83 84 8
HIGH POINT 27262 919 889-887
ST U OF NY-BUFF

STEWART, SHAWN SCOTT N AC
606 N. ELM ST. 79 79 8
HIGH POINT 27260 919 889-887
OHIO STATE U

40. HIGH POINT MEDICAL SOCIETY (Continued)

UROLOGICAL SURGERY

LAYLOCK, RUSSELL LANE NS AC
71 71 78
P. O. BOX 5388
HIGH POINT 27262 919 889-3242
LA STATE U

USSEY, MICHAEL BRUSH NS AC
61 61 71
P. O. BOX 5388
HIGH POINT 27262 919 889-3242
U OF VIRGINIA

OHNSON, JAMES ALFRED NS RT
58 58 67
606 N. ELM ST.
HIGH POINT 27262 919 889-8877
DUKE

EAVE, VICTORIA C.D. NS AC
80 81 87
606 N. ELM ST.
HIGH POINT 27262 919 889-8877
MED COLL OF VA

STETRICS AND GYNECOLOGY

RTHUR, ROBERT KEY OBG AC
51 57 57
P. O. BOX 5128
HIGH POINT 27262 919 887-3011
U OF MARYLAND

ENNETT, HERRON KENT OBG AC
52 52 54
P. O. BOX 5128
HIGH POINT 27262 919 887-3011
BOWMAN GRAY

USBY, JULIAN GOODE, JR. OBG AC
70 75 77
307 N. LINDSAY ST.
HIGH POINT 27260 919 885-0149
U OF NC

RAWFORD, ROBERT CECIL, JR. OBG AC
65 65 74
P. O. BOX 5543
HIGH POINT 27262 919 889-5422
DUKE

ROSS, ALMON RUFUS OBG L/RT
38 41 47
414 HILLCREST DRIVE
HIGH POINT 27262 919 884-1236
DUKE

ARABOW, WILLIAM SIDNEY OBG AC
63 63 71
400 N. ELM ST.
HIGH POINT 27262 919 889-4353
EMORY U

ARRINGTON, JOHN KIRBY OBG AC
57 57 65
307 N. LINDSAY ST.
HIGH POINT 27262 919 885-0149
U OF NC

ULTON, JAMES WALKER OBG AC
57 57 63
400 N. ELM ST.
HIGH POINT 27260 919 889-4353
DUKE

REENE, ELEANOR E.W. OBG AC
81 86 87
700 N. ELM ST.
HIGH POINT 27262 919 841-6574
U OF NC

OFFMAN, CARL MAURICE OBG AC
67 68 76
307 N. LINDSAY STREET
HIGH POINT 27262 919 885-0149
U OF MIAMI

ACOBS, JAMES CURTIS OBG AC
86 89 90
307 N. LINDSAY ST.
HIGH POINT 27262
U OF NC

CNAMARA, MICHAEL T. OBG AC
77 78 89
712 N. ELM ST.
HIGH POINT 27262 919 889-5422
U OF VERMONT

ANSING, MARY TINSLEY OBG AC
81 81 90
400 N. ELM ST.
HIGH POINT 27260 919 889-4353
LA STATE U

VARBURTON, KEELING ALFRED OBG AC
63 63 70
P. O. BOX 5128
HIGH POINT 27262 919 887-3011
U OF MICHIGAN

VHITE, RONDA SNOW OBG AC
83 84 88
PO BOX 5128
HIGH POINT 27262
BOWMAN GRAY

ONCOLOGY

PLOWDEN, JAMES FRANCIS ON /HEM AC
73 73 79
P. O. BOX 5904
HIGH POINT 27262 919 841-2114
MED U OF SC

OPHTHALMOLOGY

DONALD, WILLIAM BLANTON, JR. OPH AC
52 52 56
624 QUAKER LANE, SUITE 202-C
HIGH POINT 27262 919 884-2242
BOWMAN GRAY

ERRICO, JAMES MELTON OPH AC
64 64 72
100 WESTWOOD AVENUE
HIGH POINT 27262 919 889-2323
JOHNS HOPKINS

HARRELL, WADE WHITLEY OPH AC
59 59 64
319 WESTWOOD AVENUE
HIGH POINT 27262 919 883-7867
U OF NC

ORTHOPEDIC SURGERY

BLACK, KYLE E., JR. ORS AC
78 78 86
624 QUAKER LN., STE. D-200
HIGH POINT 27262 919 841-6262
BOWMAN GRAY

MARLOWE, JAMES MANNING ORS AC
60 60 68
624 QUAKER LANE, SUITE D-200
HIGH POINT 27262 919 841-6262
U OF NC

NOAH, HUGH BRYAN ORS /HS AC
66 66 76
624 QUAKER LANE, SUITE D-200
HIGH POINT 27262 919 841-6262
BOWMAN GRAY

ROSS, DAVID B. ORS AC
80 81 86
624 QUAKER LN. STE. D-200
HIGH POINT 27262 919 841-6262
VANDERBILT U

WARBURTON, MARK JOSEPH ORS AC
76 76 82
624 QUAKER LANE, SUITE D-200
HIGH POINT 27262 919 841-6262
BOWMAN GRAY

WELLER, EDWARD BROOKS ORS AC
79 84 85
624-D 200 QUAKER LANE
HIGH POINT 27262 919 841-6262
U OF LOUISVILLE

GASTROENTEROLOGY

DUCK, SIGSBEE WALTER OTO AC
81 81 79
624 QUAKE LN., STE. 301-D
HIGH POINT 27262 919 883-1366
EAST CAROLINA U

GENIEC, PAUL OTO /PS AC
64 64 70
P. O. BOX 5666
HIGH POINT 27262 919 885-0071
U OF UTAH

KEEVER, RICHARD ALAN OTO AC
69 69 77
624 QUAKER LN., STE. 301-D
HIGH POINT 27262 919 883-1366
U OF NC

PICKLESIMER, FRED LEON OTO AC
66 66 75
624 QUAKER LN. STE. 301-D
HIGH POINT 27262 919 883-1366
BOWMAN GRAY

PSYCHIATRY

FINCHER, ROBERT CHARLES, JR. P /PH L/RT
44 48 55
107 SPENCER STREET
HIGH POINT 27265 919 883-8914
MED U OF SC

LAUER, THOMAS EUGENE P /ALD AC
77 79 81
624 QUAKER LN., STE. A-111
HIGH POINT 27262 919 889-4122
U OF NC

SANDERS, STEPHEN BRIAN P AC
81 81 87
3315 KETTERING PL.
GREENSBORO 27410 919 841-7772
BOWMAN GRAY

WOLFBERG, BERNARD P AC
69 69 84
301 N. LINDSAY
HIGH POINT 27262 919 882-4898
CHICAGO MED SCH

PEDIATRICS

ADERHOLDT, MARCUS LAFAYETTE PD L
43 43 49
624 QUAKER LANE, SUITE 100-A
HIGH POINT 27262 919 882-4187
U OF MARYLAND

GEDDIE, KENNETH BAXTER PD L/RT
21 21 23
201 GREENSBORO RD., BOX 198
HIGH POINT 27260 919 882-4171
JEFFERSON

LYNCH, JOHN FRANKLIN, JR. PD L/RT
44 44 48
905 ARBORDALE DR.
HIGH POINT 27262 919 886-4049
JEFFERSON

MCFALLS, VERNON WENDELL PD AC
58 58 61
624 QUAKER LANE, SUITE 100-A
HIGH POINT 27262 919 882-4187
U OF NC

MICHAL, WILLIAM NORWOOD, JR. PD AC
60 60 67
624 QUAKER LANE, SUITE 200-A
HIGH POINT 27262
U OF NC

RAVENEL, SAMUEL DUBOSE PD AC
64 64 71
624 QUAKER LANE
HIGH POINT 27262 919 882-4171
DUKE

PLASTIC SURGERY

BURAPAVONG, THAVIJ DAVID PS /GS AC
69 74 77
416 GATEWOOD AVENUE
HIGH POINT 27260 919 882-2531
CHIENGMAI U

WILLARD, VIRGIL V., II PS AC
81 81 79
308-B BOULEVARD
HIGH POINT 27262 919 866-1667
BOWMAN GRAY

PATHOLOGY, ANATOMICAL AND CLINICAL

HIGGINS, LLOYD MALCOLM PTH AC
55 55 72
221 HILLCREST DRIVE
HIGH POINT 27262 919 883-7047
LA STATE U

VELAT, CLARENCE ANTHONY PTH /CLP L/RT
46 62 63
3301 TAOS CT.
DEMING, NM 88031
ST LOUIS U

RADIOLOGY

CLOUTIER, MICHAEL R AC
73 74 85
1017 SHAMROCK RD.
HIGH POINT 27265 919 887-1926
U OF LOUISVILLE

CROOM, ARTHUR BASCOM R L/RT
40 40 46
1311 ROBIN HOOD RD.
HIGH POINT 27260 919 882-6057
MED COLL OF VA

GRAY, CYRUS LEIGHTON R L
37 37 40
2901-B ISABEL ST.
TAMPA, FL 33607 919 887-1955
DUKE

HARRISS, WILLIAM FRED R AC
66 66 74
P. O. BOX 5007
HIGH POINT 27262 919 884-6037
BOWMAN GRAY

TESTER, RICHARD DEAN R /NM AC
58 61 64
P. O. BOX 5007
HIGH POINT 27262 919 883-6716
MED COLL OF VA

40. HIGH POINT MEDICAL SOCIETY (Continued)

WIDNER, LARRY ALLEN R AC
1310 KENSINGTON DR. 73 73 85
HIGH POINT 27260 919 887-1926
U OF VIRGINIA

ZARITZKY, DAVID RON R AC
P. O. BOX 6146 74 75 84
HIGH POINT 27262 919 887-9341
U OF FLORIDA

RHEUMATOLOGY

BENSON, JOHN FISHER RHU /IM AC
318 WESTWOOD AVENUE 47 55 55
HIGH POINT 27262 919 882-2515
U OF MARYLAND

UROLOGICAL SURGERY

AKERS, RICHARD ELBERT U AC
624 QUAKER LN., STE. B-300 59 59 70
HIGH POINT 27262 919 882-0220
U OF TENNESSEE

BROOKS, RALPH ELBERT, JR. U AC
624 QUAKER LN. STE. E-100 55 55 62
HIGH POINT 27262 919 886-5151
U OF NC

COUGHLIN, PAUL WM. FITZHENRY U AC
624 QUAKER LN. STE. E-100 78 80 85
HIGH POINT 27262 919 886-5151
U OF NC

MULLINS, TIMOTHY L. U AC
624 QUAKER LN. STE. E-100 82 83 88
HIGH POINT 27262 919 886-5151
WEST VA U

ROWE, CHARLES EUGENE, JR. U AC
321 DORADO DR. 65 65 72
HIGH POINT 27260 919 886-5151
U OF VIRGINIA

47. HOKE COMPONENT SOCIETY

OFFICERS—**President:** Robert G. Townsend, Jr., M.D., 405 S. Main St., Raeford 28376 (919 875-8101)
Secretary: Ramniklal J. Zota, M.D., 116 Campus Ave., Raeford 28376 (919 875-8106)

FAMILY PRACTICE

JORDAN, RILEY MOORE FP AC
303 PATTERSON ST. 51 51 53
PO BOX 669
RAEFORD 28376 919 875-5151
BOWMAN GRAY

TOWNSEND, ROBERT GLENN, JR. FP AC
405 S. MAIN ST. 61 64 64
PO BOX 665
RAEFORD 28376 919 875-5101
U OF LOUISVILLE

ZOTA, RAMNIKLAL JECHAND FP AC
116 CAMPUS AVENUE 71 71 75
RAEFORD 28376 919 875-8106
BARODA U

PULMONARY DISEASES

RICHARDSON, LUCILE WELSH PUD /IM L/R
355 PEACH STREET 43 56 5
PINEBLUFF 28373 919 281-323
MED COLL OF VA

49. IREDELL COMPONENT SOCIETY

OFFICERS—**President:** Frank L. Foreman, M.D., 550 Brookdale Dr., Statesville 28677 (704 873-0545)
Secretary: Tink Johnson, M.D., Old Mocksville Rd., Box 1821, Statesville 28677 (704 878-2011)

ANESTHESIOLOGY

BERMAN, JEFFREY MICHAEL AN AC
300 S. HAWTHORNE RD. 77 82 88
DEPT. OF ANESTHESIA
WINSTON-SALEM 27103
U OF BARCELONA

MELUCH, ANTHONY MATTHEW AN AC
715-D HARTNESS RD 86 86 91
STATESVILLE 28677 704 873-5651
INDIANA U

PARKIN, CHARLES EVAN AN AC
RR 10, BOX 233-B 63 62 80
STATESVILLE 28677 704 873-5651
U OF TENNESSEE

PRITCHARD, DOUGLAS DUSSEL AN AC
PO BOX 801 72 72 86
STATESVILLE 28677 919 873-0281
BOWMAN GRAY

SERENE, MARY BRUCE MCKENZIE AN AC
141 N. KELLY STREET 75 75 83
STATESVILLE 28677 704 873-5661
BOWMAN GRAY

WELLS, EUGENE AN AC
327 ST. ANDREWS RD. 79 80 88
STATESVILLE 28677 704 873-0281
AUTONOMA UNIV

CARDIOVASCULAR DISEASES

BRADFORD, JAMES HEDRICK CD /IM AC
738-A BRYANT ST. 75 75 81
STATESVILLE 28677 704 873-1189
BOWMAN GRAY

KIRKMAN, PAUL MADISON CD /IM AC
740 BRYANT ST. 65 66 70
STATESVILLE 28677 704 872-8147
BOWMAN GRAY

LAI, CHI-KWONG CD /IM AC
P. O. BOX 1460 72 74 81
STATESVILLE 28677 704 873-0281
NATL CTR-TAIPEI

NEAL, ANTHONY CHARLES CD AC
PO BOX 1821 84 84 91
OLD MOCKSVILLE RD.
STATESVILLE 28677 704 878-2011
INDIANA U

DERMATOLOGY

FOREMAN, FRANK LEROY D AC
550 BROOKDALE DR. 71 78 80
STATESVILLE 28677 704 873-0545
MED U OF SC

SCHEIBNER, STEPHEN BALL D AC
STATESVILLE MEDICAL GROUP 84 84 91
PO BOX 1821
STATESVILLE 28677 704 878-2011
U OF ARKANSAS

DIAGNOSTIC RADIOLOGY

TRITICO, ROCCO JOSEPH DR AC
P. O. BOX 803 76 76 81
STATESVILLE 28677 704 872-6122
U OF TX-HOUSTON

EMERGENCY MEDICINE

CANUPP, TONY WAYNE EM /IM AC
5722 MAYLANDIA RD. 73 73 73
CHARLOTTE 28269 704 548-0611
BOWMAN GRAY

FAMILY PRACTICE

BOWEN, BENJAMIN CURETON FP AC
RT. #9, BOX 183-H 63 63 69
STATESVILLE 28677 704 878-6592
MED U OF SC

CASH, DAVID WAYNE FP AC
310 DAVIE AVE. 82 83 8
STATESVILLE 28677 704 873-326
U OF NC

DUNLAP, BENJAMIN EMERSON FP AC
925-C THOMAS STREET 63 63 6
STATESVILLE 28677 704 872-763
U OF NC

EDWARDS, ALLEN RICHARD FP /IND AC
RT. #3, BOX B-240 79 80 8
STATESVILLE 28677 704 873-028
U OF NC

HAMILTON, BUFORD LINDSAY, JR. FP /GP AC
P. O. BOX 8 61 62 7
STONY POINT 28678 704 585-295
U OF PENN

HARTNESS, ALBERT R. FP AC
RT. #2, BOX 386-B 61 61 6
DENVER 28037 919 483-938
BOWMAN GRAY

MCLAIN, BILL REID FP RT
ROUTE #2, BOX 542 55 55 5
MOORESVILLE 28115 704 663-358
BOWMAN GRAY

MCNABB, JAMES WILLIAM FP AC
RT. #7, BOX 720 82 83 8
MOORESVILLE 28115 704 664-732
U OF SOU FLORIDA

MILLER, MICHAEL RAY FP AC
750 HARTNESS RD., STE. E 86 87 9
STATESVILLE 28677 704 872-017
U OF NC

MORROW, JOHN HOWARD FP C
PO BOX 727 85 88 8
TROUTMAN 28166 704 528-384
EAST CAROLINA U

SCHERER, IRVIN GEORGE FP AC
PO BOX 10 54 57 5
UNION GROVE 28689 704 539-473
U OF KANSAS

SKEEN, WILLIAM WALDO FP AC
417 E. STATESVILLE AVENUE 60 60 6
MOORESVILLE 28115 704 663-306
GEO WASHINGTON U

49. IREDELL COMPONENT SOCIETY (Continued)

EGALL, JOHN THOMAS FP L/RT
310 DAVIE AVENUE 43 47 48
STATESVILLE 28677 704 873-3269
U OF MARYLAND

ALKER, HARRY GORDON FP AC
310 DAVIE AVENUE 49 49 53
STATESVILLE 28677 704 873-3269
U OF VIRGINIA

STROENTEROLOGY

ASSMAN, NEIL M. GE /IM AC
PO BOX 1821 83 85 88
OLD MOCKSVILLE RD.
STATESVILLE 28677 704 878-2011
U OF PITTSBURGH

ETROZZA, JOSEPH ANTHONY GE /IM AC
110-H STOCKTON ST. 78 80 84
STATESVILLE 28677 704 873-7330
JEFFERSON

NERAL PRACTICE

ENDERSON, ANDREW MCKNITT, JR. GP L
252 W. MCLELLAND AVENUE 50 50 52
MOORESVILLE 28115 704 664-5477
BOWMAN GRAY

ITTLE, LONNIE MARCUS GP L/RT
828 WOODLAND RD. 25 25 27
STATESVILLE 28677 704 873-7442
JEFFERSON

OBERTSON, JAMES MEBANE GP L
PO BOX 150 32 32 34
HARMONY 28634 704 546-7587
TEMPLE U

NERAL SURGERY

LFORD, JAMES DAVID GS /TS AC
427 E. STATESVILLE AVENUE 66 66 81
MOORESVILLE 28115 704 663-4065
U OF NC

RINTON, LEWIS FLOYD GS /GYN AC
603 E. CENTER AVE. 58 63 65
MOORESVILLE 28115 704 664-1414
NEW YORK MED COL

AMPBELL, FRANCIS MICHAEL GS AC
642 CARPENTER AVE. 79 81 86
MOORESVILLE 28115 704 663-7905
MED U OF SC

ODE, THOMAS VANCE, III GS L/RT
326 SUMMIT AVE. 43 47 49
STATESVILLE 28677 704 873-7253
MED COLL OF VA

ARRIS, BRUCE C. GS AC
PO BOX 1460 81 86 87
STATESVILLE MEDICAL GROUP
STATESVILLE 28677 704 878-2011
U OF MISSOURI

ARMAN, WAYNE THOMAS GS AC
1726-B DAVIE AVE. 74 74 80
STATESVILLE 28677 704 873-1024
BOWMAN GRAY

EAL, DEMAR AUSTIN, III GS /CDS AC
1726-B DAVIE AVE. 78 79 84
STATESVILLE 28677 704 873-1024
OHIO STATE U

GBURN, PAUL LANIER GS /TRS L/RT
230 PENICILLIN POINT ON 46 46 60
LAKE NORMAN
TROUTMAN 28166 704 878-2011
DUKE

OBINSON, GARY THOMAS GS AC
PO BOX 1821 80 82 89
STATESVILLE 28677 704 878-2011
ALBERT EINSTEIN

WANEY, PAUL EUGENE GS /VS AC
1726-C DAVIE AVE. 78 79 84
STATESVILLE 28677 704 872-0182
OHIO STATE U

†WEARN, FRANKLIN STAFFORD GS /EM
P. O. BOX 1746 32 33 77
DECEASED--12-5-90
STATESVILLE 28677 704 872 -9494
HARVARD

GYNECOLOGY

GRIGSBY, HARDIN BLAND GYN AC
502 E. CENTER AVE. 55 55 66
MOORESVILLE 28115 704 328-8146
INDIANA U

INTERNAL MEDICINE

CALHOUN, AUBREY DANIEL IM AC
403 E. STATESVILLE AVE. 83 84 86
MOORESVILLE 28115 704 663-4443
U OF NC

ECKLEY, GEORGE MORGAN, JR. IM L/RT
569 LAKESIDE DR. 43 60 61
STATESVILLE 28677 704 873-4334
U OF PENN

FERGUSON, STEPHEN DEXTER IM AC
403 E. STATESVILLE AVE. 84 84 88
MOORESVILLE 28155 704 663-4443
BOWMAN GRAY

HENNINGER, JOSEPH BAYLOR IM AC
P. O. BOX 1808 46 45 51
STATESVILLE 28677 704 873-7789
NORTHWESTERN U

LEWIS, NEWMAN MAXVILLE IM AC
PO BOX 1821 57 57 64
STATESVILLE 28677 704 878-2011
BOWMAN GRAY

MICHAL, DAVID HILL IM /NEP AC
521 BROOKDALE DR. 82 82 89
STATESVILLE 28677 704 878-6640
BOWMAN GRAY

NICHOLSON, JOHN HARVEY, II IM L/RT
404 W. END AVE. 45 45 54
STATESVILLE 28677 704 873-8368
MED COLL OF VA

PENCE, CARLA RAFFETY IM AC
1714 DAVIE AVE. 85 00 83
STATESVILLE 28677
BOWMAN GRAY

RHYNE, JAMES MOODY IM /N AC
757 BRYANT ST. 68 68 75
STATESVILLE 28677 704 873-5658
U OF NC

STINSON, CHARLES S. IM AC
PO BOX 1821 83 84 87
STATESVILLE 28677 704 878-2011
U OF NC

TEMPLETON, THOMAS BREVARD IM AC
309 VALLEY STREAM RD. 55 55 62
STATESVILLE 28677 704 872-3455
JEFFERSON

WALTERS, HENRY CEPHAS, JR. IM AC
509 BROOKDALE DR. 76 78 82
STATESVILLE 28677 704 872-6343
MED U OF SC

NEUROLOGY

WRIGHT, ELIZABETH ANN N AC
PO BOX 1718 67 68 85
STATESVILLE 28677 704 878-6467
U OF KENTUCKY

OBSTETRICS AND GYNECOLOGY

BOYD, RICHARD ARMISTEAD OBG AC
STATESVILLE MEDICAL GROUP 56 56 63
PO BOX 1821
STATESVILLE 28677 704 878-2011
U OF NC

GOODSON, PHILLIP RICHARD OBG AC
702 HARTNESS RD. 76 76 81
STATESVILLE 28677 704 873-7250
BOWMAN GRAY

GREEN, RAY LYMAN OBG AC
1216 DAVIE AVE. 72 72 75
STATESVILLE 28677 704 873-1436
BOWMAN GRAY

KEARNS, PAUL RUTHERFORD OBG AC
750-H HARTNESS ROAD 46 46 49
STATESVILLE 28677 704 872-6389
BOWMAN GRAY

KEPLEY, MICHAEL AVERY OBG AC
527 BROOKDALE DR. 80 82 85
STATESVILLE 28677 704 872-4499
U OF NC

MEADORS, WALTER V., JR. OBG AC
702 HARTNESS RD. 79 79 87
STATESVILLE 28677 704 873-7250
U OF NC

ONCOLOGY

GRIMM, RUBY ANN ON /HEM AC
738 BRYANT ST. 75 77 82
STATESVILLE 28677 704 873-2219
WEST VA U

SHOLAR, PAM WESTMORELAND ON /HEM AC
750-B HARTNESS RD. 81 84 86
STATESVILLE 28677 704 872-3630
DUKE

OPHTHALMOLOGY

CAUSEY, ANDREW JACKSON OPH /OTO L
210 VALLEY STREAM ROAD 43 46 56
STATESVILLE 28677 704 873-8337
VANDERBILT U

HOLLAND, WALTER BOWLIN OPH AC
IREDELL EYE CLINIC 75 76 83
PO BOX 591
STATESVILLE 28677 704 872-4108
BOWMAN GRAY

KURRLE, ROBERT WM. OPH AC
PO BOX 591 84 85 88
IREDELL EYE CLI.
STATESVILLE 28677 704 872-4108
VANDERBILT U

MCKINNON, STEVE MALONE OPH AC
1308 DAVIE AVE. 79 80 85
PO BOX 991
STATESVILLE 28677 704 873-1463
U OF NC

SLIWINSKI, STANLEY FRANCIS,JR. OPH AC
PO BOX 1821 66 66 77
STATESVILLE 28677 704 878-2011
JOHNS HOPKINS

ORTHOPEDIC SURGERY

ADAMS, RICHARD WESLEY ORS AC
770 HARTNESS ROAD 62 63 68
STATESVILLE 28677 704 873-1851
BOWMAN GRAY

BENFIELD, RONALD WM. ORS /HS AC
520 BROOKDALE DR. 81 86 87
STATESVILLE 28677 704 872-7492
GEO WASHINGTON U

BEVIS, CHARLES ALAN ORS AC
1835 DAVIE AVE., STE. 415 69 69 74
STATESVILLE 28677 704 872-7676
BOWMAN GRAY

DUNAWAY, BYRON EDWARD ORS AC
PO BOX 1460 80 81 89
STATESVILLE 28677 704 878-2011
EMORY U

KUTNER, WILLIAM A., JR. ORS AC
628 CARPENTER AVE. 70 75 87
MOORESVILLE 28115 704 664-1060
DUKE

49. IREDELL COMPONENT SOCIETY (Continued)

NEWELL, JOHN CHILTON ORS AC
520 BROOKDALE 84 84 91
STATESVILLE 28677 704 872-7492
U OF MISSISSIPPI
SERENE, JAMES WILLIAM ORS AC
141 N. KELLY STREET 75 75 81
STATESVILLE 28677 704 872-7492
BOWMAN GRAY

OTOLARYNGOLOGY

BARKER, ROGER WILLIAM OTO /HNS AC
707 BRYANT ST. 67 69 74
STATESVILLE 28677 704 873-5224
U OF TENNESSEE
MILLER, HERSEY EUGENE OTO /HNS AC
707 BRYANT ST. 70 70 78
STATESVILLE 28677 704 873-5224
BOWMAN GRAY
PRENDERGAST, MARK L. OTO AC
707 BRYANT ST. 80 81 87
STATESVILLE 28677 704 873-5224
BAYLOR
WETTREICH, HERBERT L. OTO C
648 CARPENTIER ST. 84 00 00
MOORESVILLE 28115
MED SCH-UMDNJ

PSYCHIATRY

HILL, PATRICIA KAYE P AC
PO BOX 821 79 80 86
STATESVILLE 28677 704 873-8446
U OF NC

PEDIATRICS

ABELL, JAMES CURTIS PD AC
925 THOMAS STREET 66 66 73
STATESVILLE 28677 704 872-9595
U OF NC
BENTLEY, RALPH LUTHER PD AC
PO BOX 1460 60 60 67
STATESVILLE 28677 704 878-2011
U OF NC
LEWIS, DOCKERY DURHAM, JR. PD AC
PO BOX 1821 55 55 60
STATESVILLE 28677 704 878-2011
BOWMAN GRAY
LIEU, CHONG HIEUN PD /GP AC
146 E. MCLELLAND AVE. 70 75 81
MOORESVILLE 28115 704 663-1155
SEOUL NATL U
WILLHIDE, MARGARET JANE PD /A AC
P. O. BOX 1460 62 62 69
STATESVILLE 28677 704 873-0281
MED COLL OF VA

PATHOLOGY, ANATOMICAL AND CLINICAL

PITTMAN, ERIC WILLIAMS PTH A
IREDELL MEM. HOSP. BOX 1460 66 66
STATESVILLE 28677 704 873-5(
BOWMAN GRAY

RADIOLOGY

SHAFER, IRVING EVERETT, JR. R L/I
PO BOX 2449 49 49
SALISBURY 28145 704 873-5(
MED COLL OF VA
STEVENSON, ROBERT MCL. R A
RT. #8, BOX 146 59 59
STATESVILLE 28677 704 872-4
U OF NC

UROLOGICAL SURGERY

JOHNSON, TINK ASTON, III U A
PO BOX 1821 82 83
STATESVILLE 28677 704 878-2(
U OF TENNESSEE
RAM, CECIL CASPER U A
774 HARTNESS ROAD 54 54
STATESVILLE 28677 704 873-3
MED U OF SC

50. JACKSON COMPONENT SOCIETY

OFFICERS—**President:** Jeffrey Lee, M.D., Eastgate, Sylva 28779 (704 586-5521)
Secretary: Charles Toledo, M.D., 201 Asheville Hwy., Ste. 200, Sylva 28779 (704 586-5594)

ANESTHESIOLOGY

SERVOSS, RONALD LEE AN AC
P. O. BOX 984 70 73 76
SYLVA 28779 704 586-8081
LOMA LINDA U

CARDIOVASCULAR DISEASES

HADDOCK, AMOS EARL CD /CD AC
201 ASHEVILLE HGWY.,STE 203 84 85 88
SYLVA 28779 704 586-7451
U OF NC
MORGAN, RALPH SILER CD /IM L/RT
PO BOX 328 41 41 48
WEBSTER 28788 704 586-2134
RUSH MED COLL

DIAGNOSTIC RADIOLOGY

CORLEY, MALCOLM OSBOURNE DR AC
ROUTE #1, BOX 391 68 68 75
SYLVA 28779 704 586-6371
MED U OF SC

FAMILY PRACTICE

HEFFINGTON, MARK WILLIAM FP AC
P. O. BOX 510 78 79 84
CASHIERS 28717 704 743-2491
U OF TENNESSEE
NASH, WILL LIGHT FP AC
34 FISHER CREEK ROAD 58 58 75
SYLVA 28779 704 586-4012
U TX-SOU.WESTERN

GENERAL SURGERY

DURR, WALTER JACOB GS L
P. O. BOX 455 37 37 52
SYLVA 28779 704 586-2176
DOWNSTATE ME CTR
EL-BAYADI, NAGUI R. GS AC
RT. #1, BOX 51 57 69 70
SYLVA 28779 704 586-2156
U OF AIN SHAMS
JONES, FRANK COLLINS, JR. GS H
KILIMANJARO MED. CTR 60 60 73
THE GOOD SAMARITAN FOUNDATION
MOSHI,TANZANIA, E.AFRICA00000 704 586-6665
EMORY U
NOELL, WILLIAM J., JR. GS AC
201 ASHEVILLE HWY. STE. 203 82 82 89
SYLVA 28779 704 586-3976
U OF ARKANSAS

INTERNAL MEDICINE

NEWSOM, GEORGIA L. IM AC
101 ASHEVILLE HIGHWAY 78 82 85
SYLVA 28779 704 586-2132
U OF INNSBRUCK
WHITE, DONALD P., JR. IM /GE AS
RT. #2, BOX 174-J 43 44 89
HIGHLANDS 28741 704 526-4668
DUKE

OBSTETRICS AND GYNECOLOGY

HAN, GWANG SOO OBG AC
19 CENTRAL STREET 63 74 75
SYLVA 28779 704 586-4096
SEOUL NATL U
MARTONE, ARLENE RAE OBG AC
201 ASHEVILLE HIGHWAY STE. 102 72 73 84
SYLVA 28779 704 586-5865
LOMA LINDA U
SMALLWOOD, JAMES CLAYTON OBG /IM AC
201 ASHEVILLE HWY, STE. 100 75 76 84
SYLVA 28779 704 586-2135
MED COLL OF GA

OPHTHALMOLOGY

BEAUCHEMIN, RICHARD R., JR. OPH A
201 ASHEVILLE HWY.,STE. 103 83 83
SYLVA 28779 704 586-74
U OF MARYLAND

ORTHOPEDIC SURGERY

FAULL, CLIFFORD EDWARD ORS A
131 ASHEVILLE HWY. 74 75
3 EASTGATE CT.
SYLVA 28779 704 586-55
SUNY-SYRACUSE
PHILLIPS, HERBERT ORLANDAH, IV ORS A
131 ASHEVILLE HWY. 81 82
3 EASTGATE CT.
SYLVA 28779 704 586-55
U OF NC

OTOLARYNGOLOGY

DOUGLAS, BENJAMIN OTO /HNS A
2 MITCHELL RD. 75 83
SYLVA 28779 704 586-74
U OF NC

PHYSICAL MEDICINE AND REHABILITATION

CHOI-CHUNG, MOON SOOG PM A
131 ASHEVILLE HWY. 66 83
1 EASTGATE CTR.
SYLVA 28779 704 586-74
EWHA UNIV

PATHOLOGY, ANATOMICAL AND CLINICAL

HURT, JOE PAUL PTH /NA A
163 MONTEITH BRANCH ROAD 65 65
SYLVA 28779 704 586-71
U OF NC

50. JACKSON COMPONENT SOCIETY (Continued)

DIOLOGY

OOPER, ROBERT LESLIE R AC 64 64 72
59 HOSPITAL RD. 704 586-7000
SYLVA 28779
BOWMAN GRAY

JACKSON, MURRAY THREADGILL,JR. R AC 51 51 79
P. O. BOX 1043 704 586-7120
SYLVA 28779
DUKE

UROLOGICAL SURGERY

CHUNG, IL WHAN U AC 63 73 75
1 EASTGATE COURT 704 586-7446
SYLVA 28779
SEOUL NATL U

51. JOHNSTON COMPONENT SOCIETY

OFFICERS—**President:** Jitinder S. Rangar, M.D., PO Box 58, Smithfield 27577 (919 934-8171)
Secretary: Madan Lal, M.D., PO Box 239, Smithfield 27577 (919 934-3108)

ESTHESIOLOGY

EDICK, JOHN FRANCIS IVAN AN /PUD AC 54 55 69
4151 OLD GEORGETOWN RD. W. 803 475-8749
KERSHAW, SC 29067
U OF PITTSBURGH

GNOSTIC RADIOLOGY

NGAR, JITINDER SINGH DR /NM AC 64 64 82
P. O. BOX 58 919 934-8171
SMITHFIELD 27577
M C OF AMRITSAR

MILY PRACTICE

ASS, THOMAS RECTOR FP AC 57 60 61
P. O. BOX 849 919 553-7158
CLAYTON 27520
U OF TENNESSEE

AVIS, RHONDA H. FP AC 85 87 89
706 WILKINS ST. 919 934-5149
SMITHFIELD 27577
U OF NC

AN, JACK J. FP AC 68 74 76
P. O. BOX 807 919 553-5711
CLAYTON 27520
CHINA MED COLL

OHNSON, THOMAS MILTON FP AC 57 57 62
709 NORTH STREET 919 934-8556
SMITHFIELD 27577
U OF NC

ORDAN, LYNDON KIRKMAN FP AC 61 61 65
P. O. BOX 760 919 934-7687
SMITHFIELD 27577
DUKE

VERMAN, JOSEPH THOMAS, JR. FP AC 80 81 85
706 WILKINS STREET 919 934-5149
SMITHFIELD 27577
BOWMAN GRAY

ORRIS, JOHN LOUIS FP AC 86 87 89
PO BOX 699 919 894-2011
BENSON 27504
OHIO STATE U

ITTARD, JESSE C. FP AC 77 77 86
706 WILKINS ST. 919 934-5149
SMITHFIELD 27577
U OF NC

YMAN, ROBERT WEST FP AC 67 68 73
110 WADDELL STREET 919 965-3055
SELMA 27576
U OF MICHIGAN

UBER, THOMAS JOHN FP /GER AC 83 84 86
PO BOX 699 919 894-2011
BENSON 27504
U OF NC

ASTROENTEROLOGY

IOTAPARTHY, V. C. GE AC 74 79 84
2419-C E. ASH ST. 919 731-2526
GOLDSBORO 27534
KARNATAK U

GENERAL PRACTICE

JONES, DONNIE HUE, JR. GP L 42 42 47
P. O. BOX 158 919 936-5171
PRINCETON 27569
U OF VIRGINIA

LASSITER, WILL HARDEE, JR. GP L/RT 38 38 39
ROUTE #3, BOX 90 919 934-8783
FOUR OAKS 27524
MED COLL OF VA

LEE, ALLEN HENRY GP L 46 47 49
P. O. BOX 8 919 965-3251
SELMA 27576
JEFFERSON

SOX, CARL CAUGHMAN GP L 32 32 36
701 HWY 222 EAST 919 284-2732
KENLY 27542
GEO WASHINGTON U

WOODARD, BARNEY LELON GP L 33 33 35
P. O. BOX 129 919 284-3080
KENLY 27542
U OF MARYLAND

GENERAL SURGERY

IBRAHIM, KAISSAR SLEIMEN GS /CDS AC 57 65 66
712 WILKINS STREET 919 934-2360
SMITHFIELD 27577
U OF MONTPELLIER

PEREZ-SELDEN, ALICE R. GS AC 79 81 86
601-A BERKSHIRE RD. 919 934-0281
SMITHFIELD 27577
TEMPLE U

POTEAT, HUBERT MCNEILL, JR. GS L/RT 40 40 51
P. O. BOX 88 919 934-2524
SMITHFIELD 27577
JEFFERSON

SINGH, MANMOHAN GS AC 60 60 74
713 NORTH ST. 919 934-2616
PO BOX 1196
SMITHFIELD 27577
M C OF AMRITSAR

GYNECOLOGY

WOODALL, LEONARD SCHMICH GYN AC 56 56 63
711 NORTH STREET 919 934-7696
SMITHFIELD 27577
U OF NC

INTERNAL MEDICINE

ALDERMAN, EDWARD HATCHER IM /FP L/RT 45 45 48
RT. #4, BOX 40E 919 963-3148
FOUR OAKS 27524
MED COLL OF VA

BATTEN, WOODROW IM AC 44 49 49
601-B N. EIGHTH STREET 919 934-8977
SMITHFIELD 27577
BOWMAN GRAY

CREECH, JOSEPH JAN IM AC 78 80 85
707 LASSITER ST. 919 934-0212
SMITHFIELD 27577
DES MOINES OST

HARTMAN, EDWIN LONZO IM AC 75 78 80
515 N. EIGHTH STREET 919 934-1211
SMITHFIELD 27577
U OF BOLOGNA

MAYER, MARK EDWARD IM AC 82 84 84
307 W. MAIN ST. 919 894-2011
BENSON 27504
U OF ILLINOIS

SHARMA, DEVENDRA IM AC 64 64 74
P. O. BOX 1690 919 934-5568
SMITHFIELD 27577
M C OF AMRITSAR

OPHTHALMOLOGY

NUNLEY, MICHAEL G. OPH 84 85 00
7 NOBLE STREET 919 934-0699
SMITHFIELD 27577
WEST VA U

OLSON, ROBERT MORTIMER OPH L/RT 32 51 51
RT. 1, BOX 371 919 284-2526
KENLY 27542
GEO WASHINGTON U

ORTHOPEDIC SURGERY

BYLCIW, STANLEY ROBERT ORS AC 75 77 86
PO BOX 1538 919 934-1094
SMITHFIELD 27577
U OF ROMA

OTOLARYNGOLOGY

CATZ, NITZAN DANIEL OTO AC 81 83 87
607 BERKSHIRE RD. 919 934-0948
SMITHFIELD 27577
AUTONOMA UNIV.

PEDIATRICS

CARPENTER, SALLY L. PD AC 83 85 89
605 BERKSHIRE RD. 919 934-0564
SMITHFIELD 27577
U OF NC

DANIEL, THOMAS MANNING PD AC 51 54 54
501 SELMA RD. 919 934-7123
PO BOX 568
SMITHFIELD 27577
DUKE

UROLOGICAL SURGERY

MOHAMED, ADEL WAGDI U AC 65 65 76
415 N. SEVENTH STREET 919 934-5955
SMITHFIELD 27577
CAIRO U

53. LEE COMPONENT SOCIETY

OFFICERS—**President:** Larry S. Butler, M.D., 1832 Doctor's Dr., Sanford 27330 (919 774-8761)
Secretary: William E. Hall, M.D., 555 Carthage St., Lower Level, Sanford 27330 (919 775-1000)

DERMATOLOGY

CHEESBOROUGH, JOHN DAVIDSON D AC
827 S. HORNER BOULEVARD 75 77 82
SANFORD 27330 919 775-7926
DUKE

DIAGNOSTIC RADIOLOGY

DACKO, DOUGLAS MITCHELL DR AC
2634 WELLINGTON DR. 71 72 89
SANFORD 27330 919 775-2234
U OF PITTSBURGH

GANTT, CHARLES BERNARD, JR. DR AC
1606 LORD ASHLEY DR. 66 68 76
SANFORD 27330 919 775-2234
U OF ALABAMA

FAMILY PRACTICE

ALEXANDER, LAWRENCE MELTON FP AC
555 CARTHAGE STREET 52 54 54
SANFORD 27330 919 774-6518
DUKE

BLUE, JOHN FREDERICK FP AC
P. O. BOX 820 51 52 53
SANFORD 27330 919 775-7522
GEO WASHINGTON U

CLINE, ROBERT SEITZ FP S/RT
801 STUART DR. 57 57 61
SANFORD 27330 919 774-6685
U OF NC

COX, STEPHEN HAMPTON FP /A AC
2208 BROOKWOOD TRAIL 77 84 86
SANFORD 27330 919 258-6521
MED COLL OF VA

HALL, WILLIAM ERNEST FP AC
555 CARTHAGE RD. 73 74 84
LOWER LEVEL
SANFORD 27330 919 775-1000
U OF ILLINOIS

HARTNESS, WILLIAM RUFUS, JR. FP L/RT
615 CARR STREET 38 38 39
SANFORD 27330 919 775-3491
U OF LOUISVILLE

HOWARD, PAUL OSMON FP AC
555 CARTHAGE STREET 55 57 57
SANFORD 27330 919 774-6518
U OF VIRGINIA

JESSUP, PAMELA KAY H. FP AC
555 CARTHAGE ST. 77 79 75
SANFORD 27330 919 774-6518
BOWMAN GRAY

JONES, CONSTANCE CARPENTER FP C
555 CARTHAGE ST. 87 90 86
SANFORD 27330 919 774-6518
U OF NC

MACINTOSH, VICTOR HENRY FP AC
207 E. MAIN ST. 75 78 85
SANFORD 27330 919 774-6282
DUKE

MANGUM, JOHN ROWLAND FP AC
555 CARTHAGE ST. 81 82 86
SANFORD 27330 919 774-6518
U OF NC

MCCONVILLE, ROBERT HOWARD, JR. FP/GER AC
611 WICKER ST. 72 73 80
SANFORD 27330 919 774-6023
INDIANA U

NAVE, LESTER DAVID, JR. FP AC
555 CARTHAGE ST. 81 83 85
SANFORD 27330 919 774-6518
BOWMAN GRAY

PATTERSON, ROBERT WILLIAM FP /OM AC
110 FIELDS DR. 78 79 75
PO BOX 1850
SANFORD 27331 919 774-6320
U OF NC

ROGERS, BRUCE WILLIAM FP AC
5001 SIMPSON DR. 82 83 89
SANFORD 27330 919 775-7531
MED COLL OF PENN

SIMMONS, JAMES SLATER FP L/RT
P. O. BOX 850 34 34 66
SANFORD 27330 919 775-7425
MEHARRY MED COLL

TYLER, MICHAEL JOSEPH FP /ALD AC
RT. #6, BOX 7 79 79 84
PITTSBORO 27312 919 542-2731
TEMPLE U

GASTROENTEROLOGY

PATE, MARION BUTLER, III GE /IM AC
555 CARTHAGE ST. 81 82 80
SANFORD 27330 919 774-4511
BOWMAN GRAY

GERIATRICS

DOTTERER, JOHN EMANUEL GER /FP L
118 HAWKINS AVENUE 38 39 46
SANFORD 27330 919 776-5723
U OF PENN

GENERAL PRACTICE

BYERLY, JAMES HAMPTON GP L
P. O. BOX 340 35 35 38
SANFORD 27330 919 775-5932
NORTHWESTERN U

GENERAL SURGERY

EBKEN, RICHARD KEPPLER GS /TS AC
P. O. BOX 1169 68 68 85
SANFORD 27330 919 775-7146
U OF PITTSBURGH

FOUSHEE, JOHN CALDWELL GS L/RT
1710 CARTHAGE ST. 44 44 53
SANFORD 27330 919 775-7146
BOWMAN GRAY

GIBSON, JAMES FRANKLIN GS /ADM AC
1916 WILKINS DRIVE 56 56 63
SANFORD 27330 919 776-5191
DUKE

GORDON, MICHAEL ALAN GS /VS AC
114 SOUTH GULF ST. 76 76 88
SANFORD 27330 919 775-7146
TUFTS U

OELRICH, AUGUST M. GS L/RT
1010 MONTAGUE CT. 39 47 48
SANFORD 27330 919 775-7371
U OF IOWA

STANTON, EDWARD SPIRES GS /TS AC
1816 DOCTORS DR. 79 81 84
P. O. BOX 1169
SANFORD 27330 919 775-7146
DUKE

INTERNAL MEDICINE

AINSLEY, THELLIE RUPERT, JR. IM AC
1007 CARTHAGE ST. 78 81 82
SANFORD 27330 919 774-4343
U OF NC

DOTTERER, ELIZABETH JAMES IM /GYN L
118 HAWKINS AVENUE 39 39 44
SANFORD 27330 919 776-5723
U OF PENN

LITTLE, DOUGLAS JONATHAN IM /CD A
136-A CARBONTON ROAD 71 71
SANFORD 27330 919 776-07
U OF NC

LUTTERLOH, ISAAC HAYDEN, JR. IM
1817 CARTHAGE ST. 52 52
SANFORD 27330 919 775-3
JEFFERSON

SMITH, ERASTUS, JR. IM A
136-C CARBONTON RD. 73 76
PO BOX 3184
SANFORD 27330 919 775-5
TEMPLE U

OBSTETRICS AND GYNECOLOGY

BUTLER, LARRY STEPHEN OBG A
1832 DOCTOR'S DR. 79 79
SANFORD 27330 919 774-87
U OF KENTUCKY

KESLER, ARCHIE DEAN, JR. OBG A
1140 CARTHAGE ST. 66 66
SANFORD 27330 919 775-23
MED COLL OF VA

PARROTT, OLSON, II OBG A
1832 DOCTORS DR. 75 76
SANFORD 27330 919 774-87
U OF KENTUCKY

WHITE, WILLIAM HENRY, JR. OBG A
1140 CARTHAGE ST. 61 61
SANFORD 27330 919 775-23
U OF NC

ORTHOPEDIC SURGERY

BEEMER, CHARLES T. ORS A
PO BOX 1169 74 77
1816 DOCTORS' DR.
SANFORD 27330 919 775-72
MED U OF SC

CILIBERTO, SAMUEL DAVID ORS A
101 S. VANCE STREET 67 68
SANFORD 27330 919 776-05
DOWNSTATE ME CTR

OTOLARYNGOLOGY

LELIEVER, WM. CHARLES OTO /OT A
1911 K. M. WICKER DR. 74 78
SANFORD 27330 919 774-68
QUEENS U

PEDIATRICS

MCLEOD, MARY MARGARET PD /A L/
P. O. DRAWER 1047 35 35
SANFORD 27330 919 775-76
VANDERBILT U

WILLIAMS, KENAN BANKS PD L/
413 CARBONTON RD. 44 44
SANFORD 27330 919 776-32
JEFFERSON

PATHOLOGY, ANATOMICAL AND CLINICAL

DUMMIT, ELDON STEVEN, JR. PTH A
P. O. BOX 1378 59 59
SANFORD 27330 919 774-22
VANDERBILT U

53. LEE COMPONENT SOCIETY (Continued)

ADIOLOGY

ORDAN, ROBERT CALHOUN, JR. R AC 55 55 62
P. O. BOX 1007
SANFORD 27330 919 776-1210
U OF NC

UROLOGICAL SURGERY

ESPORAS, DEMOSTHENES CAGBALINO U AC 68 72 75
2313 WESTWOOD DR.
SANFORD 27330 919 775-7146
CEBU INST OF MED

PURVIS, WILLIAM HENRY U AC 73 73 80
1816 DOCTORS DR.
SANFORD 27330
U OF NC

54. LENOIR-GREENE COMPONENT SOCIETY

OFFICERS—**President:** I. Alan Craig, M.D., 100 Airport Rd., Kinston 28501 (919 522-7141)
Secretary: Charles Beasley, M.D., Kinston Clinic North, Kinston 28501 (919 523-0687)

LERGY

CARRASCO, LEONOR C. A AC 63 73 87
PO BOX 1073
1306 N. HERRITAGE
KINSTON 28503 919 523-5461
U OF SANTO TOMAS

NESTHESIOLOGY

ANAND, RAKESH TARLOK AN AC 79 79 87
LENOIR MEMORIAL HOSPITAL
KINSTON 28501 919 522-7373
U OF NAIROBI

BHOTIWIHOK, PREECHA AN AC 70 71 78
P. O. BOX 1043
KINSTON 28503 919 522-7800
U OF ADELAIDE

ARDIOVASCULAR DISEASES

KING, MICHAEL BRIAN CD /IM AC 71 71 78
313 AIRPORT ROAD
KINSTON 28501 919 522-2578
U OF NC

ERMATOLOGY

WITHERS, SYDNOR TERRY, SR. D AC 45 46 56
905 N. QUEEN STREET
KINSTON 28501 919 523-3289
MED COLL OF VA

IAGNOSTIC RADIOLOGY

ADKINS, MARK ALLEN DR AC 82 83 89
KINSTON CLINIC NORTH
KINSTON 28501 919 527-7077
U OF FLORIDA

CASEY, DENNIS NELSON DR AC 82 86 81
KINSTON CLINIC, NORTH
KINSTON 28501 919 527-7077
U OF NC

DALY, JAMES KEARNEY DR /P AC 65 65 74
2711 WESTBROOKE DR.
KINSTON 28501 919 522-3443
MED COLL OF VA

MERGENCY MEDICINE

HAYNES, CARL LEWIS, JR. EM AC 80 81 85
PO BOX 1636
KINSTON 28501 919 522-7171
U OF NC

AMILY PRACTICE

AGSTEN, JOSEPH EDWARD FP AC 73 73 78
107 AIRPORT ROAD
KINSTON 28501 919 527-4146
U OF NC

DECLERCK, PAUL ALBERT FP AC 75 78 83
2503 N. QUEEN STREET
KINSTON 28501 919 522-3717
U OF BRUXELLES

FOGLEMAN, ROSS LEE, JR. FP AC 53 55 55
KINSTON CLINIC
KINSTON 28501 919 527-7194
DUKE

FULCHER, WILLIAM L., III FP C 82 83 86
PO BOX 658
SNOW HILL 28580 919 747-2921
U OF NC

KOONTZ, JACK ALEXANDER FP /OM 64 64 69
PO BOX 800
KINSTON 28501 919 522-6100
U OF NC

KUTSCH, RICHARD MICHEL FP AC 75 76 90
2502 N. HERITAGE ST., STE. C
KINSTON 28501 919 523-5800
EMORY U

LITTLE, EDWIN PAUL FP AC 80 81 87
P. O. BOX 415
PINK HILL 28572 919 568-4111
JEFFERSON

PULLY, ROSE FP L/RT 51 51 54
805 ROUNTREE ST.
KINSTON 28501 919 523-2569
U OF PENN

GASTROENTEROLOGY

DICKSON, ROBERT TRULOCK GE AC 79 80 86
806 WESTMINISTER LANE
KINSTON 28501 919 522-3072
MED COLL OF GA

KROEGER, RICHARD JAMES GE /IM AC 78 78 84
3506 LAKEVIEW TRAIL
KINSTON 28501 919 522-0285
SUNY-SYRACUSE

GENERAL PRACTICE

HARPER, MATT CLEVELAND, JR. GP AC 53 55 59
CHERRY HOSP., CALLER BOX 8000
GOLDSBORO 27530 919 522-3162
DUKE

TROUTMAN, BELK CONNOR GP AC 52 52 53
P. O. BOX 429
GRIFTON 28530 919 524-4273
U OF MARYLAND

WOOTEN, CECIL WILLIAM, JR. GP L/RT 45 45 48
P. O. BOX 1577
KINSTON 28501 919 523-3496
HARVARD

GENERAL SURGERY

BERRY, JOHN, JR. GS AC 80 80 87
PO BOX 1316, DOCTOR'S DR.
KINSTON 28501 919 522-1626
HARVARD

CRANZ, OSCAR WILLIAM GS L/RT 31 31 36
1605 DUBOSE DR.
PO BOX 1316
KINSTON 28501 919 523-3677
MED COLL OF VA

DALE, FREDERICK PAYNE GS L/RT 46 47 53
P. O. BOX 1316
KINSTON 28501 919 522-1626
TEMPLE U

DEEPE, ROBERT GS AC 79 80 85
1300 COUNTRY CLUB DR.
KINSTON 28501 919 537-6525
U OF CINCINNATI

SABISTON, FRANK, JR. GS /TS AC 64 64 71
KINSTON CLINIC, NORTH
BOX 1316
KINSTON 28501 919 522-1626
U OF NC

WITHERINGTON, DEXTER THOMPSON GS L/RT 48 48 55
P. O. BOX 1316
KINSTON 28501 919 522-1626
HARVARD

GYNECOLOGY

MINTZ, RUDOLPH IVEY, JR. GYN AC 67 67 74
1906 STANTON ROAD
KINSTON 28501 919 527-5500
U OF NC

HEMATOLOGY

WATSON, PETER ROBINS HEM /ON AC 83 84 89
313 AIRPORT ROAD
KINSTON 28501 919 522-3072
U OF NC

INTERNAL MEDICINE

DUMAS, MARK NEAL IM AC 81 82 87
313 AIRPORT RD.
KINSTON 28501 919 522-3072
U OF ALABAMA

GALLAHER, ROBERT THOMAS IM /PUD AC 84 89 90
313 AIRPORT RD.
KINSTON 28501 919 522-3072
MARSHALL U

GOFORTH, JOHN PARKER IM AC 86 87 85
109 AIRPORT RD.
KINSTON 28501 919 522-3661
EAST CAROLINA U

HERRING, CHARLES LEONIDAS IM AC 55 55 61
310 GLENWOOD AVENUE
KINSTON 28501 919 523-0026
U OF NC

JILCOTT, RUPERT WADSWORTH, III IM AC 74 76 78
KINSTON CLINIC NORTH, STE. H
KINSTON 28501 919 522-1404
EMORY U

PARROTT, WILLIAM THOMAS, JR. IM L 43 43 49
905 N. QUEEN STREET
KINSTON 28501 919 523-4269
JOHNS HOPKINS

PIERCE, HUBERT GAINES IM /CD AC 58 58 65
313 AIRPORT ROAD
KINSTON 28501 919 522-3072
BOWMAN GRAY

WEST, GEORGE HARPER IM /CD AC 67 67 74
109 AIRPORT ROAD
KINSTON 28501 919 522-3661
BOWMAN GRAY

NEUROLOGY

SCONTSAS, GEORGE JOHN N AC 77 80 88
1607 WINDSOR RD.
KINSTON 28501 919 523-5524
U OF VIRGINIA

54. LENOIR-GREENE COMPONENT SOCIETY (Continued)

OBSTETRICS AND GYNECOLOGY

BAKER, JOAN MARGO — OBG AC: 79 80 84
105 AIRPORT RD.
KINSTON 28501 — 919 523-8383
U OF NC

BARKER, MARSHALL JAY — OBG AC: 80 81 84
1100 HARDEE RD. #112
KINSTON 28501 — 919 527-7208
WVA OSTEO SCH

BROOKS, CHARLES MICHAEL — OBG AC: 81 81 79
KINSTON CLINIC NORTH
DOCTORS DR., STE. E
KINSTON 28501 — 919 522-3373
BOWMAN GRAY

GILMORE, SAMUEL JOSEPH — OBG AC: 68 68 76
KINSTON CLINIC, NORTH, STE. E
KINSTON 28501 — 919 522-4333
INDIANA U

HAGINS, DAVID MICHAEL — OBG AC: 81 82 86
KINSTON CLINIC NORTH
KINSTON 28501 — 919 522-4333
MED COLL OF GA

LAPRADE, BENNETT WATTERSON — OBG RT: 56 63 63
123 DOGWOOD LANE
KINSTON 28501 — 919 527-7605
U OF VIRGINIA

PARKER, SAMUEL LESTER, JR. — OBG L: 42 42 50
KINSTON CLINIC, NORTH
KINSTON 28501 — 919 522-4333
GEO WASHINGTON U

OCCUPATIONAL MEDICINE

FORD, CHARLES PHILLIP, JR. — OM L/RT: 43 43 61
5216 EMERALD DR.
EMERALD ISLE 28594 — 919 354-3018
MED COLL OF VA

WARD, JOHN CHARLES — OM L/RT: 54 54 55
410 LAKE PINES DRIVE
LAGRANGE 28551 — 919 566-3119
U OF NC

OPHTHALMOLOGY

DALTON, HORACE MILTON — OPH L/RT: 39 48 48
KINSTON CLINIC, NORTH
KINSTON 28501 — 919 522-1611
U OF VIRGINIA

DENNIS, PATRICK MICHAEL — OPH AC: 76 80 81
DOWN EAST EYE CENTER, PA
2104 N. HERRITAGE ST.
KINSTON 28501 — 919 523-9599
GEORGETOWN U

RIDDICK, GEORGE WALTON, JR. — OPH AC: 66 66 72
KINSTON CLINIC, NORTH
KINSTON 28501 — 919 522-1611
U OF VIRGINIA

WRIGHT, WALTER LEE — OPH AC: 80 80 86
1908 ELEANOR ST.
KINSTON 28501 — 919 522-1611
U OF NC

ORTHOPEDIC SURGERY

CLASSEN, CHARLES HENRY, JR. — ORS AC: 66 75 76
KINSTON CLINIC, NORTH, STE. F
KINSTON 28501 — 919 522-2020
U OF MARYLAND

COOPER, EDWIN BRANAN, JR. — ORS /PM AC: 66 66 78
KINSTON CLINIC NORTH
DOCTOR'S DR.
KINSTON 28501 — 919 522-2020
DUKE

LANGLEY, JOHN THOMAS — ORS AC: 55 55 63
KINSTON CLINIC, NORTH, STE. F
KINSTON 28501 — 919 522-2020
DUKE

MCGIRT, MURPHY FRANK, JR. — ORS AC: 64 64 72
KINSTON CLI., NORTH
KINSTON 28501 — 919 522-4155
U OF NC

PATE, EUGENE WESLEY, JR. — ORS AC: 63 63 70
KINSTON CLINIC,NORTH
KINSTON 28501 — 919 522-4155
U OF NC

OTOLARYNGOLOGY

BEASLEY, CHARLES BRITTON — OTO AC: 74 75 79
KINSTON CLINIC, NORTH
KINSTON 28501 — 919 523-0687
U OF NC

HOSEA, ROBERT HAYWOOD — OTO /HNS AC: 73 73 79
KINSTON CLINIC, SUITE K
KINSTON 28501 — 919 523-0687
TULANE U

SABISTON, WALTER ROBERTS — OTO AC: 67 67 78
KINSTON CLINIC,NORTH, STE. K
KINSTON 28501 — 919 523-0687
U OF NC

PLASTIC SURGERY

CUMMINGS, RICHARD EDWARD — PS AC: 77 78 87
2508 N. QUEEN STREET
KINSTON 28501 — 919 523-7082
U OF MIAMI

PATHOLOGY, ANATOMICAL AND CLINICAL

CRAIG, ISAAC ALAN — PTH AC: 68 68 76
LENOIR MEMORIAL HOSPITAL
KINSTON 28501 — 919 522-7141
U OF NC

NYE, SYLVANUS WILLIAM — PTH /CLP AC: 57 58 6
700 ROUNDTREE STREET
KINSTON 28501 — 919 522-714
U OF ROCHESTER

RADIOLOGY

BOUZIGARD, RAY JOSEPH — R /DR AC: 66 66 7
KINSTON CLINIC, NORTH
DOCTORS DRIVE
KINSTON 28501 — 919 527-707
LA STATE U

FLOURNOY, JOHN EPPES — R AC: 66 66 7
KINSTON CLINIC, NORTH
DOCTORS DRIVE
KINSTON 28501 — 919 527-707
MED COLL OF VA

PATRICK, SIMMONS ISLER — R L/RT: 50 51 5
2218 STALLINGS DR.
KINSTON 28501
DUKE

THERAPEUTIC RADIOLOGY

KOLTIS, GORDON GARY — TR AC: 81 82 8
2900 N. HERITAGE ST.
LMH-CANCER CENTER
KINSTON 28501 — 919 551-290
U OF WISCONSIN

THORACIC SURGERY

DUBOSE, JOHN MCNEELY — TS /GS AC: 59 60 6
P. O. BOX 1316
KINSTON 28501 — 919 522-162
JOHNS HOPKINS

UROLOGICAL SURGERY

HENDERSON, JOHN PERCY, JR. — U L/RT: 51 51 53
1701 SABRA DR.
KINSTON 28501 — 919 527-3043
BOWMAN GRAY

MYERS, DAN ALLEN — U AC: 75 76 82
1413 ST. JAMES PLACE
KINSTON 28501 — 919 527-3043
U OF NC

ROSENFELD, JOEL ALAN — U AC: 85 86 90
KINSTON UROLOGICAL ASSOCS.
KINSTON CLINIC NORTH
KINSTON 28501 — 919 527-3043
MED COLL OF GA

TEJANO, FELIPE MAZON — U AC: 63 63 74
KINSTON CLINIC,NORTH
DOCTOR'S DRIVE
KINSTON 28501 — 919 527-3043
U OF PHILIPPINES

55. LINCOLN COMPONENT SOCIETY

OFFICERS—**President:** Sharon A. Colton, M.D., Lincoln Co. Hospital, Lincolnton 28092 (704 735-3071)
Secretary: Thomas W. Smith, M.D., Lincoln Co. Hospital, Lincolnton 28092 (704 735-3021)

FAMILY PRACTICE

CANADAY, MAURICE LEWIS — FP /CD AC: 58 58 63
110 DOCTOR'S PARK
LINCOLNTON 28092 — 704 735-7413
U OF NC

GRIGGS, BOYCE POWELL — FP L/RT: 43 43 46
325 PINE ST. WEST
LINCOLNTON 28092 — 704 735-2352
BOWMAN GRAY

REID, ROBERT LEARY — FP /CD AC: 54 54 59
110 DOCTOR'S PARK
LINCOLNTON 28092 — 704 735-7414
BOWMAN GRAY

REID, ROBERT LEARY, JR. — FP AC: 79 81 83
110 DOCTOR'S PARK
LINCOLNTON 28092 — 704 735-7413
BOWMAN GRAY

GENERAL PRACTICE

CRONLAND, MURPHY ALAN — GP AC: 55 55 59
P. O. BOX 488
LINCOLNTON 28092 — 704 735-3048
U OF NC

FITZGERALD, JOHN HILL — GP /PD L: 38 38 41
626 CLARK DRIVE
LINCOLNTON 28092 — 704 735-8257
U OF VIRGINIA

LAWING, DANIEL PHILMON — GP AC: 62 62 64
212 E. WATER STREET
LINCOLNTON 28092 — 704 735-5888
U OF NC

GENERAL SURGERY

BEUTEL, WILLIAM DEAN — GS AC: 79 82 86
PO BOX 811
LINCOLNTON 28093 — 704 732-1108
U OF ILLINOIS

FARLEY, DYER JACKSON, JR. — GS AC: 55 55 71
104 DOCTOR'S PARK
LINCOLNTON 28092 — 704 735-0481
LA STATE U

GAMBLE, JOHN REEVES, JR. — GS /GP AC: 46 46 46
P. O. BOX 250
LINCOLNTON 28092 — 704 735-3023
U OF MARYLAND

55. LINCOLN COMPONENT SOCIETY (Continued)

TERNAL MEDICINE

:OLTON, SHARON ANN — IM /EM AC 70 72 86
PO BOX 1566
LINCOLNTON 28092
U OF OREGON

:ROWELL, GORDON CAMERON — IM AC 57 57 57
RT. #9, BOX 999
LINCOLNTON 28092 704 735-1430
U OF NC

:RUMLEY, CHARLES EDWIN — IM AC 70 70 76
P. O. BOX 1309
LINCOLNTON 28093 704 735-3081
U OF NC

SMITH, THOMAS WARREN — IM AC 64 65 78
LINCOLN MEDICAL PK, STE. 104
LINCOLNTON 28092 704 735-6939
ST U OF NY-BUFF

BSTETRICS AND GYNECOLOGY

ARI, ABDULLAH NECIP — OBG AC 54 75 75
300 LABANS LANE
LINCOLNTON 28092 704 732-0777
U OF ANKARA

CHANG, JOHN SHYUEYI — OBG AC 71 71 79
112 DOCTORS PARK
LINCOLNTON 28092 704 732-3346
KAOHSIUNG M COLL

ORTHOPEDIC SURGERY

CONIGLIO, GERALD ANTHONY — ORS AC 72 73 90
202 LINCOLN MEDICAL PARK
LINCOLNTON 28092 704 732-1496
ST U OF NY-BUFF

PEDIATRICS

MOFRAD, ALI SABOORTINAT — PD /PHO AC 66 76 82
113 DOCTORS PARK
LINCOLNTON 28092 704 735-1441
U OF TEHRAN

RADIOLOGY

CRUZ, CORAZON SAMODIO — R /GP AC 61 61 83
ROUTE #2, BOX 310
LINCOLNTON 28092 704 435-4586
FAR EASTERN U

LEE, JOSEPH DAVID — R AC 68 69 78
P. O. BOX 954
LINCOLNTON 28092 704 735-6654
TEMPLE U

UROLOGICAL SURGERY

NACHAMIE, DAVID A. — U AC 71 77 82
117-B DOCTORS PARK
PO BOX 937
LINCOLNTON 28093 704 732-2661
U OF BOLOGNA

56. MACON-CLAY COMPONENT SOCIETY

OFFICERS—**President:** William Arban, M.D., PO Box 1209, Franklin 28734 (704 369-4236)
Secretary: Trent Johnson, M.D., PO Box 1209, Franklin 28734 (704 369-4212)

O SPECIALTY LISTED

KING, GARLAND COFFIELD — AC 81 84 79
39 RIVERVIEW ST.
FRANKLIN 28734 704 524-9595
U OF NC

NESTHESIOLOGY

LONG, CATHY ROMINE — AN AC 81 81 88
70 JONES CREEK RD.
FRANKLIN 28734 704 524-9026
WEST VA U

LONG, JIM T., JR. — AN AC 79 80 88
70 JONES CREEK RD.
FRANKLIN 28734 704 524-9026
MED U OF SC

AMILY PRACTICE

BAUMRUCKER, JOHN FREDERICK — FP AC 70 70 70
P. O. BOX 1060
HIGHLANDS 28741 704 526-2125
U OF CINCINNATI

FISHER, ERNEST WOODROW — FP L/RT 41 41 47
102 GEORGIA ROAD
FRANKLIN 28734 704 524-5752
MED U OF SC

KAHN, JOSEPH WILLIAM — FP L/RT 42 42 46
P. O. BOX 147
FRANKLIN 28734 704 524-9696
U OF CINCINNATI

GENERAL PRACTICE

MANGUM, CARLYLE THOMAS, JR. — GP L/RT 47 47 49
P. O. BOX 429
HIGHLANDS 28741 704 526-2125
HARVARD

GENERAL SURGERY

CHOI, SAN HO — GS AC 63 64 73
8 RIVERVIEW ST., STE. 202
FRANKLIN 28734 704 524-7464
YONSEI U

INTERNAL MEDICINE

MILLIGAN, RICHARD PATRICK — IM AC 83 83 89
8 RIVERVIEW ST., STE. 101
FRANKLIN 28734 704 369-4158
WRIGHT STATE U

OPHTHALMOLOGY

BLODGETT, GEO. S., III — OPH AC 60 60 88
DOCTORS BLDG., STE. 110
FRANKLIN 28734 704 524-7333
U OF MIAMI

ORTHOPEDIC SURGERY

HAYDON, FRANK A. — ORS AC 76 78 90
PO BOX 660
FRANKLIN 28734 704 369-6380
U OF COLORADO

PEDIATRICS

BERGER, FREDERICK ALLEN — PD AC 72 72 75
28 RIVERVIEW STREET, #114
FRANKLIN 28734 704 524-8474
ST LOUIS U

UROLOGICAL SURGERY

STRIBLING, MICHAEL DEAN — U AC 84 84 89
28 RIVERVIEW ST., STE. 108
FRANKLIN 28734 704 369-6397
MED U OF SC

57. MADISON COMPONENT SOCIETY

OFFICERS—**President:** W. Ernest Powell, M.D., 1 Chestnut St., Mars Hill 28754 (704 689-2581)
Secretary: F. B. Jones, M.D., Laurel Medical Center, Marshall 28753 (704 689-3501)

ERMATOLOGY

CATALANO, PHILIP M. — D AC 60 81 86
1416 59TH ST. WEST
BRADENTON, FL 34209 813 792-2934
U OF PENN

FAMILY PRACTICE

DUCK, WALTER OTIS — FP L/RT 43 43 46
DRAWER 729
MARS HILL 28754 704 689-2411
HAHNEMANN

JONES, FRIELDEN BERTIE, III — FP AC 76 76 85
LAUREL MEDICAL CENTER
MARSHALL 28753 704 656-2611
U OF NC

GENERAL PRACTICE

POWELL, WILLIAM ERNEST, JR. — GP AC 50 50 52
1 CHESTNUT STREET
MARS HILL 28754 704 689-2581
JEFFERSON

59. McDOWELL COMPONENT SOCIETY

OFFICERS—**President:** Paul Yun, M.D., PO Box 1284, Marion 28752 (704 652-3351)
Secretary: Donald Strickland, M.D., 500 Medical Ct., Ste. A, Marion 28752 (704 652-7776)

ABDOMINAL SURGERY

DENUNA, VICENTE BOGADOR — ABS /GS AC: 64 73 74
28 N. LOGAN STREET
MARION 28752 — 704 652-5797
U OF SANTO TOMAS

FAMILY PRACTICE

ALLEN, JOHN O. HENRY — FP /IM AC: 51 51 53
31 STATE ST.
PO BOX 1189
MARION 28752 — 704 652-5251
BOWMAN GRAY

ELLIS, GEORGE GREENE — FP AC: 62 65 66
P. O. BOX 789
OLD FORT 28762 — 704 668-7694
U OF LOUISVILLE

MCCALL, MICHAEL ALVIN — FP /GER AC: 52 53 56
P. O. BOX 1229
MARION 28752 — 704 433-2492
DUKE

MCENTIRE, JERRILL LEE — FP AC: 71 71 74
700 AIRPORT RD.
MARION 28752 — 704 668-7694
U OF NC

TURNBULL, JOSEPH TAYLOR — FP AC: 70 72 78
W. THOMASON STREET
OLD FORT 28762 — 704 668-7694
U OF PITTSBURGH

GENERAL PRACTICE

MCINTOSH, ARCHIBALD NOCK — GP L: 44 48 48
219 S. MAIN STREET
MARION 28752 — 704 652-4211
DUKE

RAGAZ, FLORIAN JOHN — GP /CD AC: 49 50 53
315 E. COURT STREET
MARION 28752 — 704 652-4420
U OF WISCONSIN

YUN, PAUL TAJEN — GP AC: 68 75 77
PO BOX 1284
MARION 28752 — 704 652-3351
U OF SINGAPORE

GENERAL SURGERY

CHUNG, JOSEPH YANGSOO — GS /GP AC: 66 72 73
1200 MEDICAL COURT
MARION 28752 — 704 652-5818
SEOUL NATL U

INTERNAL MEDICINE

BURTON, MARK WESLEY — IM C: 86 87 90
500 MEDICAL COURT WEST
MARION 28752 — 704 652-7776
U OF TENNESSEE

DIOQUINO, RENATO MERCADO — IM /PUD AC: 64 65 7
240 S. MAIN STREET
MARION 28752 — 704 652-221
U OF SANTO TOMAS

OBSTETRICS AND GYNECOLOGY

RUDD, EUGENE GREGORY — OBG AC: 77 82 8
PO BOX 1413
MEDICAL COURT SOUTH
MARION 28752 — 704 652-301
MED U OF SC

ORTHOPEDIC SURGERY

TOPPLE, STANLEY CRAIG — ORS H: 57 57 8
P.O. BOX 45
PRESBYTERIAN HOSP.
KIKUYU, KENYA — EMORY U

PEDIATRICS

ALI, SHAMSHAD — PD /NPM AC: 60 74 7
1200 MEDICAL CTR. #B
MARION 28752 — 704 652-638
PRINCE OF WALES

60. MECKLENBURG COUNTY SOCIETY

OFFICERS—**President:** Kenneth E. Wood, M.D., 2200 Richardson Dr., Charlotte 28211 (704 372-9820)
Secretary: B. Parthehenia Richardson, M.D., 1012 S. Kings Dr., #224, Charlotte 28283 (704 372-0638)
Executive Director: Carolyn Scruggs, 118 Colonial Ave., Charlotte 28207 (704 376-3688)

NO SPECIALTY LISTED

BROWN, RHETT LEROY — R: 89 00 91
421-A N. CHURCH ST.
CHARLOTTE 28202 — 704 355-2000
MED U OF SC

FRASER, HELEN R. — AC: 76 80 87
4116 POMFRET LANE
CHARLOTTE 28211
CASE WESTERN RES

HARRIS, WILLIAM RANDALL, IV — R: 89 00 89
4053 ARBOR WAY
CHARLOTTE 28211 — 704 338-3172
U OF NC

KEMP, ELIZABETH ANN — R: 87 00 90
1540 GARDEN TERR. #505
CHARLOTTE 28203 — 919 355-3153
U OF MIAMI

KOEHLER, LISA ANN — R: 89 90 86
839 SCALEYBARK RD. #11-M
CHARLOTTE 28209 — 704 355-3181
U OF NC

MELVIN, TERESA BOWEN — R: 87 00 85
CHARLOTTE MEM. HOSP.
CHARLOTTE 28203 — 704 338-2000
U OF NC

SMITH, BRENDAN EDWARD — AC: 89 00 89
CHARLOTTE MEM. HOSPITAL
CHARLOTTE 28232 — 704 338-3176
MED U OF SC

TITUS, ANTHONY F. — AC: 85 85 90
7810 PROVIDENCE RD., STE. 102
CHARLOTTE 28226 — 704 543-6636
WRIGHT STATE U

ALLERGY

BOEHM, O. ROBERT — A /IM AC: 73 74 77
1718 EAST FOURTH ST., STE. 703
CHARLOTTE 28204 — 704 332-7731
U OF KANSAS

GAGE, LUCIUS GASTON, JR. — A /RHU L/RT: 48 52 53
1350 S. KINGS DRIVE
CHARLOTTE 28207 — 704 372-8750
DUKE

KLIMAS, JOHN THOMAS — A /PD AC: 73 73 80
CHARLOTTE ALLERGY CLINIC
2711 RANDOLPH RD., BLDG 400
CHARLOTTE 28207 — 704 372-7900
ST U OF NY-BUFF

ABDOMINAL SURGERY

FLEMING, LAURENCE EDWIN — ABS L/RT: 31 31 34
1116 PROVIDENCE ROAD
CHARLOTTE 28207 — 704 332-6896
U OF PENN

ALLERGY & IMMUNOLOGY

HUMPHRIES, C. THOMAS — AI /PD39 AC: 80 85 90
411 BILLINGSLEY RD. #104
CHARLOTTE 28211
VANDERBILT U

HUTCHESON, JAMES STERLING — AI AC: 61 68 68
2711 RANDOLPH RD. BLDG. 400
CHARLOTTE 28207 — 704 372-7900
JOHNS HOPKINS

MCKAY, HAMILTON W., JR. — AI AC: 55 56 61
2711 RANDOLPH RD. STE. 400
P. O. BOX 221189
CHARLOTTE 28207 — 704 372-7900
JOHNS HOPKINS

STONE, BRIAN D. — AI /PD C: 85 90 88
KAISER PERMANENTE
2211-H EXECUTIVE ST.
CHARLOTTE 28208 — 704 394-0890
MED COLL OF GA

ALCOHOL & DRUG ABUSE

TOLER, WILLIAM RICHARD — ALD /FP AC: 65 67 68
3524 COLONY RD. #B
CHARLOTTE 28211 — 704 376-7546
LOMA LINDA U

AEROSPACE MEDICINE

MORRIS, DAVID PERRY — AM AC: 48 49 81
6958 FOLGER DR.
CHARLOTTE 28226 — 704 364-4798
U OF PENN

ANESTHESIOLOGY

BALLENTYNE, KEITH — AN /FP AC: 58 80 86
2330 RED FOX TRAIL
CHARLOTTE 28211 — 704 377-5772
U OF EDINBURGH

BLACKLEY, DONALD WAYNE — AN C: 86 88 90
2001 VAIL AVENUE
CHARLOTTE 28207 — 704 379-5000
MED COLL OF GA

BUCHANAN, DALE CONWAY — AN /PD AC: 82 82 89
4217 HORSESHOE BEND
MATTHEWS 28105 — 704 338-2372
MED U OF SC

BULLARD, GRAHAM WESLEY — AN AC: 81 82 80
PO BOX 36351
CHARLOTTE 28236 — 704 375-6792
U OF NC

BYRNE, JOHN JACOB — AN AC: 78 79 83
PO BOX 32861
CHARLOTTE 28232 — 704 355-2372
ALBANY MED COLL

60. MECKLENBURG COUNTY SOCIETY (Continued)

AMP, JOHN FREDERICK AN AC
6901 N. BALTUSROL LANE 78 79 89
CHARLOTTE 28210 704 375-6792
JEFFERSON

HEN, TONG YONG AN AC
200 HAWTHORNE LN 68 76 79
CHARLOTTE 28204 704 371-4049
KAOHSIUNG M COLL

OLLAWN, THOMAS HERBERT AN AC
1901 RANDOLPH RD. 56 59 61
CHARLOTTE 28207 704 366-5311
U OF MARYLAND

REEN, WILLIAM ROBERT AN AC
1901 RANDOLPH RD. 73 73 91
CHARLOTTE 28207 704 375-6792
NORTHWESTERN U

REIG, JOHN HAMILTON AN AC
4023 ARBOR WAY 56 56 74
CHARLOTTE 28211 704 366-9408
U OF GLASGOW

ANNA, PAMELA GAYLE AN AC
20318 NORMAN COLONY RD.
METROLINA ANES GROUP 86 90 91
CHARLOTTE 28236 704 379-5955
UNIV OF NC

ARRIS, CHARLES THEODORE, JR. AN L/RT
401 FESBROOK COURT 51 51 53
CHARLOTTE 28270 704 364-0514
U OF VIRGINIA

ERSHEY, CHARLES DANA, JR. AN AC
8820 WINGED BOURNE 70 73 77
CHARLOTTE 28210 704 554-0239
U OF PENN

OLMES, NORMAN ALBERT AN C
813 SOUTHWEST DR. 84 85 90
DAVIDSON 28036 704 356-1516
OHIO STATE U

OSSEINIAN, HAHMOOD AN AC
PO BOX 36351 66 77 78
CHARLOTTE 28236 704 377-5772
U OF TEHRAN

LEIN, DEYSY MARTINEZ AN AC
1901 RANDOLPH RD. 62 62 69
CHARLOTTE 28207 704 375-5126
U OF MADRID

EE, YEN CHICH AN AC
PO BOX 33549 68 73 76
CHARLOTTE 28233 704 371-4049
CHINA MED COLL

ENNON, DAVID STANCIL AN AC
2221 HOGAN CT. 75 75 86
CHARLOTTE 28270 704 371-4049
U OF NC

UPO, SUSAN ELIZABETH AN /IM AC
1400 LINDA LANE 79 81 90
CHARLOTTE 28211
BOWMAN GRAY

CGINNIS, LEE ANN M. AN AC
3716 POMFRET LANE 79 79 86
CHARLOTTE 28211 704 338-2372
U OF MICHIGAN

ILLER, JOSHUA SETH AN AC
PO BOX 32861 86 88 90
CHARLOTTE 28232 704 377-5772
MED U OF SC

OTUZ, DANIEL JOHN AN AC
9718 PALLISERS TER. 81 83 88
CHARLOTTE 28210 704 379-5943
U CIUDAD JUAREZ

OLLARD, JOHN ALAN AN AC
PO BOX 32861 62 67 86
CHARLOTTE 28232 704 355-2000
U OF MANCHESTER

OTTER, PATRICIA LYNN AN AC
6439 BENTRIDGE DR. 76 76 84
CHARLOTTE 28226 704 377-1647
BOWMAN GRAY

CARLATA, SALVATORE AN AC
2825 RANDOLPH RD. 43 46 77
CHARLOTTE 28211 704 541-7218
DOWNSTATE ME CTR

INGLEVICH, THOMAS E. AN /PA AC
PO BOX 97 75 77 88
POMFRET, CT 06258 704 379-5956
M C OF WISCONSIN

SNYDER, JOHN MICHAEL AN AC
935 EAGLE ROAD 68 70 76
WEDDINGTON 28173 704 384-4274
U OF ALBERTA

VADNAIS, PAUL ALFRED AN AC
PO BOX 33549 79 84 76
CHARLOTTE 28233 704 371-4049
U OF NC

WARREN, CASPER CARL, JR. AN AC
8349 BAR HARBOR LANE 59 59 60
CHARLOTTE 28210 704 554-8553
U OF NC

WARREN, THOMAS LINSON AN AC
314 CARLETON CIRCLE 78 79 85
SPARTANBURG, SC 29301 704 379-5943
WEST VA U

WASHINGTON, EDWARD M. AN /AN AC
19633 STOUGH FARMS RD. 76 76 82
HUNTERSVILLE 28078 704 663-1113
NEW YORK MED COL

CRITICAL CARE MEDICINE

FRAZIER, ARNOLD RAY CCM /IM AC
CAROLINAS MEDICAL CENTER 69 70 75
P. O. BOX 32861
CHARLOTTE 28232 704 331-2121
U OF KENTUCKY

CARDIOVASCULAR DISEASES

AUSTIN, WALTER KENNETH, JR. CD /IM AC
1001 BLYTHE BLVD., STE. 300 77 78 83
CHARLOTTE 28203 704 373-0212
MED COLL OF GA

BENNETT, WILLIAM TYSON CD /IM AC
3626 LATROBE DR. 65 65 73
CHARLOTTE 28211 704 364-0057
TULANE U

CEDARHOLM, JOHN CARL CD AC
1960 RANDOLPH RD. 82 83 89
CHARLOTTE 28207 704 373-1503
NORTHWESTERN U

DOWDY, DAVID A. CD AC
700 E. STONEWALL ST., STE. 760 76 80 88
CHARLOTTE 28202 704 322-5117
U OF CONNECTICUT

ELLIOTT, CHARLES MARTIN CD /IM AC
1001 BLYTHE BLVD., STE. 300 70 70 77
CHARLOTTE 28203 704 373-1503
MED COLL OF VA

FEDOR, JOHN MICHAEL CD /IM AC
1001 BLYTHE BLVD. #300 76 76 84
CHARLOTTE 28203 704 373-0212
DUKE

GALLAGHER, JOHN JOSEPH CD /IM AC
1001 BLYTHE BLVD. #300 68 74 84
CHARLOTTE 28203 704 373-1503
GEORGETOWN U

HALL, DONALD GAMMON CD AC
1001 BLYTHE BLVD. #300 65 65 72
CHARLOTTE 28203 704 373-1503
U OF FLORIDA

HARBOLD, NORRIS BROWN, JR. CD /IM AC
1001 BLYTHE BLVD. #300 66 66 71
CHARLOTTE 28203 704 373-1503
GEO WASHINGTON U

HARRIS, CHARLES WALKER CD /IM AC
125 BALDWIN AVE. 60 60 66
CHARLOTTE 28204 704 374-1696
U OF NC

HERNDON, WM. M., JR. CD AC
1718 E. FOURTH ST., STE. 501 81 82 83
CHARLOTTE 28204 704 347-2024
U OF NC

IRONS, GEORGE VERNON, JR. CD /IM AC
1718 E. 4TH ST., #501 56 64 66
CHARLOTTE 28204 704 343-9800
U OF ALABAMA

KREMERS, MARK STUART CD AC
1718 E. 4TH ST. 79 79 90
CHARLOTTE 28204 704 343-9800
INDIANA U

MASSEY, THOMAS NEELY, JR. CD /IM AC
217 TRAVIS AVENUE 55 55 61
CHARLOTTE 28204 704 372-3350
BOWMAN GRAY

MATHEWS, EMMETT C., JR. CD AC
1350 S. KINGS DR. 68 68 89
CHARLOTTE 28207 704 342-8070
U OF VIRGINIA

MCLEAN, JONATHAN OWENS CD /IM AC
1718 E. FOURTH ST. #501 71 71 81
CHARLOTTE 28204 704 377-0575
U OF NC

NIESS, GARY STEWART CD AC
1718 E. FOURTH ST., STE. 501 73 73 85
CHARLOTTE 28204 704 347-2024
U OF NC

PASQUINI, JOHN ALDO CD /IM AC
1718 E. 4TH ST., #501 80 82 86
CHARLOTTE 28204 704 347-2024
U OF CONNECTICUT

RAO, INNANJE RAVINDRANATH CD /IM AC
2330 RANDOLPH RD 65 66 76
CHARLOTTE 28207 704 377-0575
STANLEY MED COLL

REEN, BERNARD MURTY,III CD AC
1718 E. 4TH ST., #501 80 80 90
CHARLOTTE 28204 704 343-9800
GEORGETOWN U

ROBERTS, WILLIAM STANLEY CD /IM AC
1718 E. 4TH ST., #501 75 76 81
CHARLOTTE 28204 704 347-2024
U OF VIRGINIA

SMITH, ROGER ENOS CD /IM AC
125 BALDWIN AVE. 64 65 73
CHARLOTTE 28204 704 374-1696
U OF ILLINOIS

STACK, ROBERT KEVIN CD /IM AC
2330 RANDOLPH RD. 81 83 90
CHARLOTTE 28207 704 377-0575
WAYNE STATE U

SVENSON, ROBERT HAROLD CD /IM AC
1001 BLYTHE BLVD. #300 69 70 75
CHARLOTTE 28203 704 373-1503
U OF CHICAGO

THOMLEY, ALAN MILES CD /IM AC
1001 BLYTHE BLVD. #300 77 78 85
CHARLOTTE 28203 704 373-1503
U OF MIAMI

VALERI, FRANK SCOTT CD /IM AC
2330 RANDOLPH RD. 80 81 85
CHARLOTTE 28207 704 377-0575
PENN STATE U

WEBSTER, JOEL STOOPS CD /IM AC
2330 RANDOLPH AT LAUREL 53 53 74
CHARLOTTE 28207 704 377-0575
U OF MARYLAND

WILSON, B. HADLEY CD AC
1001 BLYTHE BLVD. #300 80 81 76
CHARLOTTE 28203 704 373-1503
DUKE

WISE, DANIEL EDWIN CD /IM AC
1718 E. 4TH ST. #501 69 69 77
CHARLOTTE 28204 704 347-2024
OHIO STATE U

YOUNT, JAMES ALVIN CD /CD AC
3535 RANDOLPH ROAD 66 66 74
CHARLOTTE 28211 704 365-0760
U OF NC

ZIMMERN, SAMUEL H. CD /IM AC
1001 BLYTHE BLVD., #300 74 74 83
CHARLOTTE 28203 704 373-1503
JOHNS HOPKINS

CARDIOVASCULAR SURGERY

ANDREWS, D. SCOTT CDS /TS AC
301 HAWTHORNE LANE 75 75 84
CHARLOTTE 28204 704 375-8413
OHIO STATE U

DAUGHERTY, HARRY KARRICK CDS /TS AC
1001 BLYTHE BLVD. #300 59 63 65
CHARLOTTE 28203 704 373-1500
U OF LOUISVILLE

60. MECKLENBURG COUNTY SOCIETY (Continued)

EDGERTON, THOMAS ARTHUR CDS /TS AC
1900 RANDOLPH RD., STE. 216 81 82 80
CHARLOTTE 28207 704 372-1306
BOWMAN GRAY

EDWARDS, CHARLES HILLMAN, II CDS /TS AC
301 HAWTHORNE LANE 73 73 84
CHARLOTTE 28204 704 375-8413
U OF NC

HESS, PHILIP JOSEPH CDS /TS AC
1001 BLYTHE BLVD. #300 68 68 77
CHARLOTTE 28203 704 373-1500
OHIO STATE U

HOWE, HAROLD RAGAN, JR. CDS /TS AC
301 HAWTHORNE LN. 80 81 89
CHARLOTTE 28204 704 375-8413
BOWMAN GRAY

STIEGEL, ROBERT MARK CDS /TS AC
1001 BLYTHE BLVD. #300 79 81 87
CHARLOTTE 28203 704 373-1500
U OF NC

CHILD PSYCHIATRY

CARMICHAEL, DENNIS D. CHP /P AC
1917 PARK DR. 50 57 58
CHARLOTTE 28204 704 372-5238
U OF ABERDEEN

CLINICAL PATHOLOGY

JENNER, PAUL WM. CLP /BLB AC
2425 PARK RD. 79 80 88
PO BOX 36507
CHARLOTTE 28203 704 376-1661
U OF ILLINOIS

COLON AND RECTAL SURGERY

MASSEY, CHARLES CASWELL, JR. CRS AC
2015 RANDOLPH RD. STE. 201 61 61 67
CHARLOTTE 28207 704 333-1259
DUKE

MCCARTY, RALPH LEEVES CRS L/RT
843 HEMPSTEAD PL. 42 46 47
CHARLOTTE 28207 704 333-1259
TULANE U

VERMEULEN, FRED D. CRS /GS AC
2015 RANDOLPH RD. #201 76 77 83
CHARLOTTE 28207 704 333-1259
CASE WESTERN RES

WALKER, WILLIAM ALFRED CRS /GS AC
2015 RANDOLPH RD., STE. 201 78 79 75
CHARLOTTE 28207 704 333-1259
U OF NC

DERMATOLOGY

DILLARD, SAM BOOKER D L/RT
1530 QUEENS RD. #1204 46 46 50
CHARLOTTE 28207 704 333-8811
MED COLL OF VA

ELLIOTT, JOS. ALEXANDER, JR. D L
1900 RANDOLPH RD. SUITE 714 44 44 45
CHARLOTTE 28207 704 375-0043
U OF MICHIGAN

FRASER, DONALD DOYLE D AC
1901 BRUNSWICK AVE. STE. 240 80 81 85
CHARLOTTE 28207 704 377-3299
MED SCH-UMDNJ

GOSLEN, JUNIUS BLAKE, III D AC
1718 E. 4TH ST., STE 304 73 73 91
CHARLOTTE 28204 704 375-6766
U OF NC

HARBEN, DOUGLAS JAMES D /IM AC
3535 RANDOLPH RD., STE. 101-W 70 71 79
CHARLOTTE 28211 704 364-6110
SUNY-SYRACUSE

LEWIS, DANIEL MICHAEL D RT
4311 WOODGLEN LANE 80 81 85
CHARLOTTE 28226 704 364-6110
U OF NC

LOGAN, WILLIAM SUMNER D AC
1350 S. KINGS DRIVE 68 68 74
CHARLOTTE 28207 704 372-8750
DUKE

MITCHENER, CALVIN CHAMBERS D AC
1600 E. FIFTH STREET 49 54 54
CHARLOTTE 28204 704 376-1523
JEFFERSON

NEWTON, GRAHAM DOUGALD D AC
1600 E. FIFTH STREET 54 54 61
CHARLOTTE 28204 704 376-1523
CORNELL U

REAVES, CHARLES EDWIN D /DMP AC
1718 E. FOURTH ST. #605 67 67 88
CHARLOTTE 28204 704 333-2147
U OF MISSISSIPPI

REID, JOHN HEYWARD D /FP C
2918 HEATHGATE RD. 73 79 90
CHARLOTTE 28226 704 551-4209
MED U OF SC

ROGERS, JIM A D AC
1600 E. FIFTH ST. 85 86 90
CHARLOTTE 28204 704 376-1523
U OF TX-HOUSTON

SCHUPBACH, CURTIS WAYNE D AC
2620 E. 7TH ST. 69 70 76
CHARLOTTE 28204 704 358-9900
WASHINGTON U

SCHWILM, ARLEN LEE D AC
3535 RANDOLPH ROAD, SUITE 101 67 67 74
CHARLOTTE 28211 704 364-6110
MED COLL OF VA

SELSOR, LINDA CAROL D AC
3535 RANDOLPH RD. 82 83 88
101 WENDOVER BLDG.
CHARLOTTE 28211 704 364-6110
U OF NC

STEAGALL, ROBERT WORTH, JR. D RT
6434 SARDIS ROAD 55 55 65
CHARLOTTE 28270 704 364-1050
DUKE

STEIGER, HOWARD PAUL D L/RT
BOX 2144 39 41 47
PAWLEYS ISLAND, SC 29585 803 237-4596
DUKE

THOMPSON, JOHN ALBERT, JR. D AC
2310 RANDOLPH ROAD 67 67 74
CHARLOTTE 28207 704 376-9849
BOWMAN GRAY

WELTON, DAVID GOE D L/RT
1131 SCOTLAND AVE. 35 39 39
CHARLOTTE 28207 704 333-5927
U OF WISCONSIN

WILLIAMSON, JOYCE M. D AC
3535 RANDOLPH ROAD, 101-W 58 66 67
CHARLOTTE 28211 704 364-6110
U OF EDINBURGH

DIAGNOSTIC RADIOLOGY

FAGAN, JAMES ARTHUR DR /NM AC
PO BOX 33549 66 66 73
CHARLOTTE 28233 704 384-4056
MED U OF SC

GALLAGHER, KATHLEEN ANN DR
651 CHURCH ST. NORTH 76 76 84
CABARRUS RDIOLOGY
CONCORD 28025 704 786-0214
U OF NC

GENKINS, STEVEN MARK DR /IM AC
PO BOX 33549 80 81 88
CHARLOTTE 28233 704 384-4056
COLUMBIA U

GROMET, MATTHEW DR AC
CHARLOTTE RADIOLOGY 79 80 84
PO BOX 36937
CHARLOTTE 28236 704 362-1945
U OF NY-ST BROOK

GRUBB, WALTER LEE, JR. DR AC
CHARLOTTE RADIOLOGY 61 61 72
PO BOX 36937
CHARLOTTE 28236 704 362-1945
MED COLL OF VA

GUILFORD, WILLIAM BONNER DR AC
CHARLOTTE RADIOLOGY 73 73 78
PO BOX 36937
CHARLOTTE 28236 704 362-1945
U OF NC

HOLLENBERG, BENNETT R. DR AC
3738 ABINGDON RD. 81 85 86
CHARLOTTE 28211 704 371-4056
INDIANA U

KOURI, EDWARD WILLIAMS DR AC
CHARLOTTE RADIOLOGY 68 68 74
3535 RANDOLPH RD., STE. 102
CHARLOTTE 28211 704 365-0343
U OF NC

MOORE, ARL VAN, JR. DR AC
CHARLOTTE RADIOLOGY 74 74 85
PO BOX 36937
CHARLOTTE 28236 704 365-0343
U OF ARKANSAS

NIXON, JOHN RANDALL DR AC
PO BOX 221249 78 78 89
CHARLOTTE 28222 704 371-4057
U TX-SOU.WESTERN

ROEMER, CLIFFORD ERIC DR AC
PO BOX 33549 76 76 81
CHARLOTTE 28233 704 371-4056
CASE WESTERN RES

SHAW, DALE RUSSELL DR AC
CHARLOTTE RADIOLOGY 73 73 00
PO BOX 36937
CHARLOTTE 28236 704 362-1945
DUKE

WALLACE, TERRY W. DR AC
CHARLOTTE RADIOLOGY 82 83 88
PO BOX 36937
CHARLOTTE 28236 704 333-0224
U OF NC

WISE, FRED EUGENE, JR. DR L
1350 S. KINGS DRIVE 45 54 55
CHARLOTTE 28207 704 372-8750
MED COLL OF VA

EMERGENCY MEDICINE

BAKER, JOHN WOODWARD EM /IM AC
CHARLOTTE MEMORIAL HOSPITAL 71 71 75
P. O. BOX 32861
CHARLOTTE 28232 704 355-5225
U OF VIRGINIA

CALLAWAY, CLIFFORD KAY EM AC
PO BOX 667967 70 71 79
CHARLOTTE 28266 704 588-3418
U OF OKLAHOMA

CLARK, JOHN BLUE, JR. EM /IM AC
3830 SILVERBELL DR. 73 74 79
CHARLOTTE 28211 704 371-4160
VANDERBILT U

CRAIG, SANDRA ANNE EM AC
4741 #2-G HEDGEMORE DR. 87 87 90
CHARLOTTE 28209 704 355-3181
MED COLL OF VA

FADIAL, JOHN MURRAY EM AC
PO BOX 33549 67 67 70
CHARLOTTE 28233 704 384-5160
U OF FLORIDA

FORD, MARSHA DEAN EM /IM AC
1313 CEDAR LANE 79 81 85
CHARLOTTE 28226 704 355-3181
MED U OF SC

HARTLE, EDGAR OWEN EM AC
821 MT. VERNON AVE. 81 82 83
CHARLOTTE 28203 704 334-8419
PENN STATE U

HENDRIX, ARTHUR M., JR. EM AC
PO BOX 1238 78 78 88
DAVIDSON 28036 704 892-4353
MED COLL OF GA

MARTINEZ, JOSEPH C. EM AC
CAROLINAS MEDICAL CENTER 81 81 90
PO BOX 32861
CHARLOTTE 28232 704 355-3181
LSU-SHREVEPORT

60. MECKLENBURG COUNTY SOCIETY (Continued)

MONSON, STEVEN ROBERT EM C 82 83 89
1000 BLYTHE BLVD.
CHARLOTTE 28232 704 355-3181
U OF ALABAMA

NORTON, EVE GWENDOLYN EM AC 81 81 84
4000 KINGSCOTE CR.
CHARLOTTE 28226 704 355-3181
U OF CINCINNATI

O'DELL, KEVIN BRUCE EM AC 83 85 91
10208 RATTERSLY CT.
CHARLOTTE 28226 704 355-3181
U OF NEBRASKA

OWENSBY, CHARLTON NORMAN EM AC 84 85 90
4917 S. BOULEVARD
CHARLOTTE 28217 704 527-3700
BOWMAN GRAY

RUNGE, JEFFREY WILLIAM EM AC 81 82 85
CAROLINAS MEDICAL CENTER
PO BOX 32861
CHARLOTTE 28232 704 355-3181
MED U OF SC

SCHAFERMEYER, ROBERT WM. EM /PD AC 73 74 82
CAROLINAS MEDICAL CENTER
P. O. BOX 32861
CHARLOTTE 28232 704 355-3181
U OF MISSOURI

SCHNEIDER, ROBERT E. EM /U AC 70 71 89
2001 CLEMATIS DR.
CHARLOTTE 28211 704 355-3181
CREIGHTON U

ENDOCRINOLOGY

HINSHAW, HOWARD THOMAS END /DIA0 AC 66 66 74
1350 S. KINGS DRIVE
CHARLOTTE 28207 704 372-8750
U OF NC

KELLY, LUTHER W., JR. END /NM AC 48 54 55
1350 S. KINGS DR.
CHARLOTTE 28207 704 372-8750
HARVARD

KLEINMANN, RICHARD E. END /IM AC 73 76 88
1350 S. KINGS DR.
CHARLOTTE 28207 704 372-8750
U OF PENN

TUCKER, WILLIAM STUART, JR. END /IM AC 78 81 85
1350 S. KINGS DR.
CHARLOTTE 28207 704 342-8000
U OF VIRGINIA

FORENSIC PATHOLOGY

LARKIN, GLENN MICHAEL FOP /LM AC 66 68 78
4000-E PROVIDENCE RD.
CHARLOTTE 28211 704 364-4718
U OF LOUVAIN

FAMILY PRACTICE

BARRINGER, THOMAS AVERY,III FP AC 79 80 83
10724 PARK ROAD
CHARLOTTE 28210 704 542-6577
U OF NC

BARTELT, CURTIS FREDERICK FP AC 53 54 75
6725 FAIRVIEW ROAD
CHARLOTTE 28210 704 365-0677
TEMPLE U

BENSON, TERRY LEE FP AC 75 76 88
1618 E. MOREHEAD ST.
CHARLOTTE 28207 704 563-1290
MED SCH-UMDNJ

BLOUNT, CHARLES WHITNER, JR. FP AC 73 75 76
6708 ALBEMARLE ROAD
CHARLOTTE 28212 704 536-4903
MED COLL OF GA

BONNER, STEVEN PAUL FP AC 79 79 86
211 S. SHARON AMITY RD.
CHARLOTTE 28211 704 366-7586
U OF ARKANSAS

CHAMBLEE, DONALD VANCE FP AC 56 56 61
211 S. SHARON AMITY ROAD
CHARLOTTE 28211 704 366-7586
U OF TENNESSEE

CHRYSLER, CHARLES OTIS FP AC 56 60 60
3894 E. INDEPENDENCE BLVD.
CHARLOTTE 28205 704 537-5424
OHIO STATE U

CLARK, WILLIAM GILMER FP AC 78 78 91
1921 BEVERLY DR.
CHARLOTTE 28207 704 371-4160
U OF NC

COPELAND, DONALD LEE FP AC 63 63 66
19607 HIGHWAY 73
DAVIDSON 28036 704 892-3723
U OF NC

CRAWFORD, JOHN THOMAS FP AC 87 88 90
6900 FARMINGDALE DR.
CHARLOTTE 28212 704 536-1362
BOWMAN GRAY

DULIN, THOMAS LEROY FP AC 57 57 61
200 GREENWICH RD.
CHARLOTTE 28211 704 366-5002
DUKE

FRAASA, ROBERT CONRAD FP L/RT 53 56 56
4441 HEDLEY WAY #307
CHARLOTTE 28210 704 366-9444
U OF CINCINNATI

GARMON-BROWN, OPHELIA EUGENIA FP AC 80 81 79
402 E. SUGARCREEK RD.
CHARLOTTE 28213 704 535-8245
U OF NC

GOODMAN, DONALD BRUCE, JR. FP AC 73 75 76
6708 ALBEMARLE RD.
CHARLOTTE 28212 704 536-4903
UNIV OF NC

†GREENE, ROBERT HADLEY FP 27 28 65
2001 OAKLAWN AVENUE
DECEASED--11-23-90
CHARLOTTE 28216 704 332 -7506
HOWARD U

GREENWOOD, JAMES BROOKS, JR. FP L/RT 44 44 47
2319 PROVIDENCE RD.
CHARLOTTE 28211 704 366-4260
U OF PENN

HALL, DAVID HARTMAN FP AC 84 84 89
910 N. ALEXANDER ST.
CHARLOTTE 28206 704 355-3084
DUKE

HALL, GEORGE DANIEL FP AC 85 88 91
3109 WILLOW OAK RD.
CHARLOTTE 28209 704 392-1847
EAST CAROLINA U

HALL, MARY NOLAN FP AC 83 84 87
PO BOX 32861
CAROLINAS MEDICAL CENTER
CHARLOTTE 28232 704 355-3172
CORNELL U

HANNA, RICHARD TINSLEY FP /HYP AC 76 77 79
6900 FARMINGDALE DRIVE
CHARLOTTE 28212 704 536-1362
MED U OF SC

HUFF, JANICE ELIZABETH FP AC 85 87 89
7920 MOORES CHAPEL RD.
CHARLOTTE 28214 704 392-1847
ST LOUIS U

HUNTLEY, DANNY EDWARD FP AC 77 78 85
6708 ALBEMARLE RD.
CHARLOTTE 28212 704 536-4903
BOWMAN GRAY

KOURI, WILLIAM HERBERT FP AC 61 61 64
6900 FARMINGDALE DR.
CHARLOTTE 28212 704 536-1362
U OF NC

LICAUSE, GINA GARRETT FP R 89 00 90
1793 JAMESTON DR.
CHARLOTTE 28209 704 358-1360
U OF CINCINNATI

LITTLE, JOHN MONROE, JR. FP /GER AC 76 77 90
PO BOX 32861
CHARLOTTE 28232 704 355-5219
MED U OF SC

LONG, WILLIAM JOSEPH FP /GER AC 80 82 84
402 E. SUGAR CREEK RD.
CHARLOTTE 28213 704 596-0822
MED COLL OF GA

MCMILLAN, MARSHALL P. FP AC 84 85 87
6900 FARMINGDALE DR.
CHARLOTTE 28212 704 536-3286
MED U OF SC

MELARAGNO, HELEN P. FP AC 74 75 77
2001 E. FIFTH STREET
CHARLOTTE 28204 704 373-1663
MED U OF SC

MENSCER, DARLYNE FP /GER AC 79 79 75
DEPT. OF FAMILY PRACTICE
CAROLINAS MEDICAL CENTER
CHARLOTTE 28232 704 355-3172
U OF NC

NAUMOFF, PHILIP FP L/RT 37 39 39
1012 KINGS DRIVE
CHARLOTTE 28283 704 334-4665
DUKE

NEWELL, ERNEST T. FP /OM RT 50 53 54
22354 COUNTRY CLUB LN.
DAVIDSON 28036
DUKE

NOELL, JOHN STANFORD FP AC 56 56 83
PO BOX 16518
CHARLOTTE 28297 704 584-0956
U OF NC

PASCAL, JOHN WILLIAM FP AC 79 79 89
4444 PARK ROAD
CHARLOTTE 28209 704 366-7586
EMORY U

PRIDE, HAROLD SYLVESTER FP /PD AC 59 60 66
700 E. STONEWALL #200
CHARLOTTE 28202 704 377-3015
MEHARRY MED COLL

RANN, EMERY LOUVELLE FP L/RT 48 49 66
PO BOX 16179
CHARLOTTE 28297 704 394-3275
MEHARRY MED COLL

ROBINSON, MARK DAVID FP AC 83 85 90
PO BOX 32861
CAROLINA MEDICAL CENTER
CHARLOTTE 28232 704 355-3172
U OF PENN

SALTON, RUSSELL ARTHUR,III FP AC 73 75 76
1515 MOCKINGBIRD LN. #312
CHARLOTTE 28209 704 333-5447
WEST VA U

SANCHEZ, ALEXANDER FRANCIS, JR. FP/OM AC 75 76 89
SPRINGS INDUSTRIES
PO BOX 70
FORT MILL, SC 29715 803 547-3970
U OF FLORIDA

SAXE, JESSICA SCHORR FP AC 77 78 81
910 N. ALEXANDER
CHARLOTTE 28206 704 355-3084
TUFTS U

SCOTT, JACKSON VANCE FP 59 62 66
101 W. CATAWBA AVE.
MOUNT HOLLY 28120 704 827-3014
JEFFERSON

SIGMON, JAMES LEWIS, JR. FP AC 66 66 71
P. O. BOX 32861
CHARLOTTE 28232 704 355-3172
U OF NC

TRACY, JOHN WILLIAM FP AC 82 83 86
1618 E. MOREHEAD ST.
CHARLOTTE 28207 704 377-3610
UNIV OF NC

WATKINS, ROY WAYNE FP AC 86 87 90
7810 PROVIDENCE RD.
ARBORETUM URGENT CARE
CHARLOTTE 28226 704 543-6636
EAST CAROLINA U

WITHROW, JERRY WAYNE FP AC 80 81 89
KAISER PERMANENTE
5950 FAIRVIEW RD.
CHARLOTTE 28210 704 551-4200
U OF NC

60. MECKLENBURG COUNTY SOCIETY (Continued)

FACIAL PLASTIC SURGERY, OTOLARYNGOLOGY

EDWARDS, ELLISON FRANCIS FPS /MFS AC
61 61 68
3535 RANDOLPH ROAD, STE. 204
CHARLOTTE 28211
U OF NC

GASTROENTEROLOGY

CARR, THOMAS ANTHONY GE /IM AC
82 82 88
217 TRAVIS AVE.
CHARLOTTE 28204
704 372-3350
MISSOURI U-KC

FULP, SAM RUSSELL GE /IM C
83 84 83
3535 RANDOLPH RD., STE. 300
CHARLOTTE 28211
704 365-0760
BOWMAN GRAY

GASPARI, MICHAEL M. GE /IM AC
81 82 89
1900 RANDOLPH RD., STE. 310
CHARLOTTE 28207
704 372-7974
HAHNEMANN

GAVIGAN, THOMAS JOSEPH GE AC
74 75 84
1718 E. 4TH ST., STE. 607
CHARLOTTE 28204
704 338-6300
GEORGETOWN U

HANSON, JOHN STEPHEN GE /IM AC
79 79 84
1718 E. 4TH ST., STE. 607
CHARLOTTE 28204
704 375-9484
WASHINGTON U

HIESTAND, FITZ GERALD, JR. GE /IM AC
56 58 61
1350 S. KINGS DRIVE
CHARLOTTE 28207
704 372-8250
U OF VIRGINIA

MOORE, JOHN HERBERT, III GE /IM AC
77 80 83
2015 RANDOLPH RD. #208
CHARLOTTE 28207
704 377-4009
EMORY U

REINDOLLER, ROBERT WILLIAM GE /IM AC
75 76 81
1900 RANDOLPH RD., STE. 310
CHARLOTTE 28207
704 372-7974
U OF MARYLAND

ROBERTS, THOMAS ADAMS, JR. GE /IM AC
70 70 79
1718 E. 4TH ST., STE. 607
CHARLOTTE 28204
704 372-8750
U OF NC

SIGMON, RICHARD LEE, JR. GE /PD AC
79 80 76
1900 RANDOLPH RD., STE. 310
CHARLOTTE 28207
704 372-7974
U OF NC

TUCKER, PAUL CHAMBLISS, JR. GE /IM AC
65 65 73
NALLE CLINIC
1350 S. KINGS DR.
CHARLOTTE 28207
704 372-8750
MED COLL OF GA

GYNECOLOGICAL ONCOLOGY

HIGGINS, ROBERT VICTOR GO AC
82 83 79
1901 BRUNSWICK AVE.
CHARLOTTE 28207
704 343-3400
EAST CAROLINA U

GENERAL PRACTICE

GRAHAM, DAVID ERIC GP /AM AC
52 52 54
P. O. BOX 459
201 SADIE DR.
MATTHEWS 28105
704 847-8664
U OF MARYLAND

PHILLIPS, DEWITT DEWEY, JR. GP L/RT
46 47 48
1943 QUEENS RD., WEST
CHARLOTTE 28207
704 375-1221
BOWMAN GRAY

ROBINSON, CHARLES WILSON GP L/RT
30 30 32
8919 PARK RD. CC-3
CHARLOTTE 28210
704 551-7053
U OF PENN

SEAY, HILLIS LEDBETTER GP L/RT
30 30 34
PO BOX 528
HUNTERSVILLE 28078
704 875-6946
VANDERBILT U

TSAI, GEORGE SHOU-CHYUAN GP AC
70 77 80
P. O. BOX 430
INDIAN TRAIL 28079
704 821-7056
CHINA MED COLL

GENERAL PREVENTIVE MEDICINE

KEENER, STEPHEN ROBERT GPM /FP AC
80 81 85
2845 BEATTIES FORD ROAD
CHARLOTTE 28216
704 336-4701
DUKE

GENERAL SURGERY

BARTON, FORBES MARSHALL, JR. GS AC
63 63 71
2501 HANDLEY PL.
CHARLOTTE 28226
704 375-3728
U OF TENNESSEE

BRABSON, JOHN ANDERSON GS /GYN L
39 39 44
1030 N. EDGEHILL RD. #308
CHARLOTTE 28207
704 333-0611
HARVARD

BRENIZER, ADDISON GORGAS, JR. GS/TS L/RT
40 42 48
1333 QUEENS RD. #101
CHARLOTTE 28207
704 376-4942
HARVARD

CATTIE, JOHN VINCENT GS /CDS AC
74 75 83
106 E. PHIFER STREET
MONROE 28110
704 289-8528
JEFFERSON

COLLIN, CHARLES F. GS AC
75 75 87
1350 S. KINGS DR.
CHARLOTTE 28207
704 372-8750
TULANE U

CRAVEN, DALLAS CLIFFORD, JR. GS AC
75 79 80
2104 RANDOLPH ROAD
CHARLOTTE 28207
704 377-3900
U OF NC

EVANS, ERNEST CRAIG GS AC
73 75 89
2300 RANDOLPH RD.
CHARLOTTE 28207
704 376-0327
MED U OF SC

FORT, LYNN, III GS /TS AC
60 60 68
3535 RANDOLPH ROAD, 201-W
CHARLOTTE 28211
704 364-8100
DUKE

GEISSINGER, WILLIAM TUTTLE GS AC
65 65 85
3535 RANDOLPH RD. #201
CHARLOTTE 28211
704 364-8100
U OF VIRGINIA

GODWIN, WINSTON YUVAWN, JR. GS AC
78 78 86
2300 RANDOLPH RD.
CHARLOTTE 28207
704 376-0327
MED U OF SC

HAMMER, DONALD EDWIN GS AC
66 68 74
2206 CUMBERLAND AVENUE
CHARLOTTE 28203
704 375-3504
U OF ROCHESTER

HIPP, EDWARD REGINALD, JR. GS /TS L/RT
47 47 47
1901 QUEENS RD.
CHARLOTTE 28207
704 372-8750
U OF VIRGINIA

HOLLEMAN, JEREMIAH HENRY, JR. GS /VS AC
71 71 85
1350 S. KINGS DR.
CHARLOTTE 28207
704 372-8750
TULANE U

HOLLENBECK, JOHN IVOR GS AC
68 68 76
3535 RANDOLPH RD.,201-W
CHARLOTTE 28211
704 364-8100
OHIO STATE U

HOPE, HAROLD PAGAN, JR. GS AC
67 73 75
2300 RANDOLPH ROAD
CHARLOTTE 28207
704 376-0327
MED U OF SC

JETT, HARRIMAN HARDING GS AC
67 67 72
2104 RANDOLPH ROAD
CHARLOTTE 28207
704 377-3900
MED U OF SC

KELLER, GUY OTIS GS AC
44 55 55
1928 RANDOLPH RD. #213
CHARLOTTE 28207
704 372-6767
U OF VIRGINIA

MCADAMS, CHARLES R.,JR. GS /GYN L/RT
45 45 48
PO BOX 221366
CHARLOTTE 28222
704 366-3609
JEFFERSON

MCELWEE, THOMAS BRENTON GS AC
80 81 86
3535 RANDOLPH RD. 201-W
CHARLOTTE 28211
704 757-4629
TULANE U

MELTON, KATHERINE ROSE GS /GYN RT
54 55 60
1900 RANDOLPH RD. #906
CHARLOTTE 28207
704 332-6756
MED COLL OF PENN

MONSON, ROBERT CHARLES, II GS /VS AC
73 74 78
3535 RANDOLPH RD., STE. 201-W
CHARLOTTE 28211
704 364-8100
U OF MICHIGAN

MURRAY, B. SHARON GS AC
83 85 83
101 W. T. HARRIS BLVD.
SUITE B-211
CHARLOTTE 28213
704 547-0834
BOWMAN GRAY

NEAL, RUTHERFORD DOUGLAS GS /GYN L/RT
42 42 48
2214 THETFORD CT.
CHARLOTTE 28211
704 365-6541
MED COLL OF VA

NOVICK, THOMAS L. GS /VS AC
78 81 87
3535 RANDOLPH RD. STE. 201-W
CHARLOTTE 28211
704 364-8100
DUKE

PAGE, GEORGE DANTZLER GS L/RT
42 49 50
2128 QUEENS ROAD EAST
CHARLOTTE 28207
704 377-9788
EMORY U

PARSONS, MARSHAL RAY GS AC
77 78 87
2104 RANDOLPH RD.
CHARLOTTE 28207
704 377-3900
U OF NEW MEXICO

PENDER, JOHN ROBERT, III GS AC
47 47 55
1851 E. THIRD STREET, STE. 105
CHARLOTTE 28204
704 332-4169
JEFFERSON

PRESSLY, CLAUDE LOWRY GS /TS L/RT
43 43 50
1863 CASSAMIA PL.
CHARLOTTE 28211
704 376-0327
U OF PENN

RAYMER, JAMES BARKER GS AC
53 53 61
2300 RANDOLPH ROAD
CHARLOTTE 28211
704 376-0327
CASE WESTERN RES

THOMPSON,WILLARD CHANDLER,JR. GS AC
50 55 55
3535 RANDOLPH RD., 201-W
CHARLOTTE 28211
704 364-8100
CORNELL U

VAN-HOY, JOE MILTON GS L/RT
38 38 49
3735 ABINGDON ROAD
CHARLOTTE 28211
704 364-5069
DUKE

VAUGHN, ROBERT DEE, JR. GS /VS AC
76 77 82
518 EAST BLVD.
CHARLOTTE 28203
704 333-0741
MEHARRY MED COLL

VISSER, PHILIP ALBERT GS /CRS AC
76 77 84
1925 PARK DRIVE
CHARLOTTE 28204
704 333-1574
U OF IOWA

WATKINS, JAMES ALLISON GS AC
76 78 82
518 EAST BLVD.
CHARLOTTE 28203
704 333-0741
MEHARRY MED COLL

WILSON, HENRY VANPETERS, III GS /TS AC
61 64 67
3535 RANDOLPH RD., 201-W
CHARLOTTE 28211
704 364-8100
JOHNS HOPKINS

GYNECOLOGY

BOLON, CHARLES GORDON GYN L/RT
48 56 56
RR 10, BOX 865
MOORESVILLE 28115
704 333-4104
OHIO STATE U

60. MECKLENBURG COUNTY SOCIETY (Continued)

ROWN, CHARLES WILLIAM GYN /OBS
2127 QUEENS ROAD, EAST 41 41 46
DECEASED--11-22-90
CHARLOTTE 28207 704 333 -9852
GEORGETOWN U

RAIN, JACK LEE GYN /END AC
1901 BRUNSWICK AVE. 66 66 85
CHARLOTTE 28207 704 338-3149
U OF ARKANSAS

ULP, JOHN HARRY, JR. GYN AC
401 S. SHARON AMITY ROAD 61 64 71
CHARLOTTE 28211 704 365-0110
LOMA LINDA U

UBANKS, WILLIAM MALCOLM, JR. GYN AC
1712 E. FOURTH STREET 54 60 60
CHARLOTTE 28204 704 375-9074
MED COLL OF GA

OOD, CHRISTOPHER KENNEDY GYN AC
1712 E. FOURTH STREET 54 54 59
CHARLOTTE 28204 704 375-9074
JEFFERSON

IUEY, THOMAS WALKER, JR. GYN L/RT
1012 KINGS DRIVE 42 43 50
CHARLOTTE 28207 704 375-4216
U OF PENN

AWRENCE, PATRICIA ANN GYN AC
1001 BLYTHE BLVD. STE. 402 50 54 54
CHARLOTTE 28203 704 355-5214
U OF VIRGINIA

AY, HARVEY CRAIG GYN L
2711 RANDOLPH ROAD, SUITE 305 42 50 50
CHARLOTTE 28207 704 372-8020
TULANE U

CCOY, JOSEPH BENNETT, JR. GYN L/RT
3646 SEDGEWOOD CIR. 50 50 54
CHARLOTTE 28211 704 377-0461
U OF PENN

CGEE, JOHN ASBURY, JR. GYN AC
1901 BRUNSWICK AVE. 58 58 66
CHARLOTTE 28207 704 343-3400
U OF NC

CLEOD, WILLIAM LESLIE GYN L/RT
2711 RANDOLPH ROAD, STE. 305 45 52 52
CHARLOTTE 28207 704 372-8020
LA STATE U

ANKIN, RUFUS PINKNEY, JR. GYN AC
1718 E. FOURTH ST., #307 52 52 56
CHARLOTTE 28204 704 332-8103
U OF PENN

CHUG, JOHN BUTLER GYN AC
1718 E. 4TH ST., #907 57 61 65
CHARLOTTE 28204 704 364-1041
MED COLL OF VA

ART, JAMES MILTON, JR. GYN AC
MERCY SOUTH MED. CTR. 53 57 58
10724 PARK RD.
CHARLOTTE 28210 704 542-0744
TEMPLE U

ING, RICHARD LEE GYN AC
1901 BRUNSWICK AVE. 76 76 85
CHARLOTTE 28207 704 343-3400
U OF NC

OLTZ, JOHN HENRY EARLY GYN L/RT
916 CHEROKEE RD. 42 42 46
CHARLOTTE 28207 704 372-6113
U OF PENN

ORTMAN, WILLIAM JEROME, JR. GYN/OBS AC
2711 RANDOLPH RD. #309 64 64 76
CHARLOTTE 28207 704 376-1580
BOWMAN GRAY

EMATOLOGY

CHAPMAN, GEOFFREY SEWALL HEM AC
1350 S. KINGS DR. 75 76 87
CHARLOTTE 28207 704 372-8750
U OF CALIFORNIA

GODWIN, HERMAN ALLEN, JR. HEM /IM AC
1001 BLYTHE BLVD., STE. 500 63 63 75
CHARLOTTE 28203 704 355-5100
BOWMAN GRAY

HAND SURGERY

BAKER, DAVID STANFORD, II HS /ORS AC
2600 E. 7TH ST. 76 77 82
PO BOX 35228
CHARLOTTE 28235 704 372-9820
U OF ARKANSAS

BOATRIGHT, JAMES RICHARD HS /ORS AC
1001 BLYTHE BLVD., STE. 200 66 66 74
CHARLOTTE 28203 704 373-0544
WASHINGTON U

INFECTIOUS DISEASES

FERNANDEZ, CHARLES RAYMOND ID /IM AC
1350 S. KINGS DRIVE 68 68 76
CHARLOTTE 28207 704 342-8000
TULANE U

HAWES, STEPHEN JAMES, JR. ID /IM AC
1928 RANDOLPH RD., STE. 314 76 77 83
CHARLOTTE 28207 704 331-9413
U OF NC

HORTON, JAMES MARVIN ID AC
1350 S. KINGS DR. 77 84 87
CHARLOTTE 28207 704 372-8750
DUKE

JEMSEK, JOSEPH GREGORY ID /IM AC
1350 S. KINGS DR. 74 75 80
CHARLOTTE 28207 704 372-8750
U OF ILLINOIS

WEINGARTEN, NORDEN M. ID AC
1928 RANDOLPH RD., STE. 314 76 78 89
CHARLOTTE 28207 704 331-9413
U OF MARYLAND

INTERNAL MEDICINE

ADCOCK, JIMMIE WARREN IM AC
217 TRAVIS AVE. 82 83 82
CHARLOTTE 28204 704 372-3350
U OF NC

ALBRIGHT, HAROLD DOWE, III IM AC
411 BILLINGSLEY RD., STE. 105 82 83 80
CHARLOTTE 28211 704 333-4175
EAST CAROLINA U

ALEXANDER, HENCY C., JR. IM /PUD RT
733 PLANTATION ESTATES DR. 49 53 56
B-205
MATTHEWS 28105 704 841-1025
DUKE

ALEXANDER, JAMES FROSST IM /GE AC
3535 RANDOLPH ROAD 63 63 70
CHARLOTTE 28211 704 365-0760
MCGILL U

ALEXANDER, JAMES MOSES IM L/RT
225 PERRIN PL. 34 34 37
CHARLOTTE 28207 704 365-0760
MCGILL U

BAUCOM, MARY PADGETT IM AC
PO BOX 32861 80 81 84
CHARLOTTE 28232 704 355-3165
U OF NC

BELL, RALPH MONROE IM L/RT
8223 BONDS GROVE CHURCH RD. 41 41 49
WAXHAW 28173 704 377-6569
JEFFERSON

BENEDUM, JOHN LOYLE IM AC
1350 S. KINGS DR. 73 75 78
CHARLOTTE 28207 704 364-7037
WEST VA U

BERSIN, ROBERT MERLE IM /CD AC
1001 BLYTHE BLVD., STE. 300 81 89 90
CHARLOTTE 28203 704 373-1503
U OF CALIF-LA

BIGHAM, ROY STINSON, JR. IM L/RT
4000 MCKEE RD. 41 41 46
CHARLOTTE 28270 704 846-2233
U OF VIRGINIA

BLACK, JAMES HAMPTON IM /NEP AC
125 BALDWIN AVE. 63 63 69
CHARLOTTE 28204 704 374-1696
BOWMAN GRAY

BLANK, ROY CRARY IM AC
335 N. CASWELL RD. 72 72 87
CHARLOTTE 28204 704 376-4852
U OF MARYLAND

BOWEN, SAMUEL T. IM AC
PO BOX 490 84 85 87
DAVIDSON 28036 704 892-5076
U OF TEXAS

BRADFORD, EDWARD AYERS IM AC
201 E. MATTHEWS STREET 76 79 81
MATTHEWS 28105 704 365-0760
U OF FLORIDA

BROOKS, WILLIAM LESTER, JR. IM /RHU AC
CHARLOTTE INT. MED. ASSOCIATES 47 48 55
411 BILLNGSLEY RD., #105
CHARLOTTE 28211 704 333-4175
DUKE

BRUNETTI, LOUIS LEO IM /LM AC
4912 CHARMAPEG AVE. 83 84 89
CHARLOTTE 28211 704 365-0104
MT SINAI SCH MED

BULLOCK, WILLIAM ROBERT IM /OM AC
217 TRAVIS AVENUE 68 68 72
CHARLOTTE 28204 704 372-3350
U OF TENNESSEE

CARTER, COLEMAN DELYNNE IM AC
217 TRAVIS AVENUE 71 71 76
CHARLOTTE 28204 704 372-3350
U OF NC

CHENEY, PAUL R., JR. IM /IG AC
10620 PARK RD., STE. 234 77 78 88
CHARLOTTE 28210 704 542-1952
EMORY U

CITRON, DAVID SANFORD IM /FP L/RT
8117 RISING MEADOW RD. 44 52 53
CHARLOTTE 28277 704 542-0608
WASHINGTON U

CLEEK, JOHN BROOKS IM AC
3535 RANDOLPH RD. STE.300 85 86 89
CHARLOTTE 28207 704 365-0760
MED COLL OF GA

COLAVITA, PAUL G. IM /CD AC
1001 BLYTHE BLVD. STE. 300 79 80 87
CHARLOTTE 28203 704 373-1507
BOWMAN GRAY

COLES, DEBRA LYNN IM R
2616 PARK RD. #F 88 00 85
CHARLOTTE 28209 704 355-2000
U OF NC

CONARD, DAVID LLOYD IM AC
101 W. T. HARRIS BLVD. C-101 81 82 85
CHARLOTTE 28213 704 547-1462
U OF ROCHESTER

COOPER, TIM ERVIN, JR. IM /PUD AC
RANDOLPH ROAD IM ASSOC. 59 59 67
1900 RANDOLPH RD., #812
CHARLOTTE 28207 704 366-8240
DUKE

CORBIN, RICHARD PRESLEY IM /PUD AC
PO BOX 32861 69 69 90
CAROLINAS MEDICAL CENTER
CHARLOTTE 28232 704 355-3165
U OF VIRGINIA

DEAN, ELIZABETH ANNE IM AC
125 BALDWIN AVE. 84 86 89
CHARLOTTE 28204 704 338-6300
BOWMAN GRAY

DORSETT, JOHN DEWEY, JR. IM /CD AC
411 BILLINGSLEY RD. #105 51 51 56
CHARLOTTE 28211 704 333-4175
WASHINGTON U

DOUGLAS, JOHN MUNROE IM L/RT
4107 POMFRET LN. 39 49 50
CHARLOTTE 28211 704 366-0267
DUKE

EISENOFF, RICHARD SCOTT IM AC
3 FAIRVIEW PLAZA, STE. 100 82 87 90
CHARLOTTE 28210 919 551-4200
AUTONOMA UNIV

ELLIS, CLARENCE ONEIL IM AC
PO BOX 35294 80 81 85
CHARLOTTE 28235 704 342-3888
U OF NC

60. MECKLENBURG COUNTY SOCIETY (Continued)

FERREE, CHARLES ELLIOT IM AC
10512 PARK ROAD EXT. 80 82 86
CHARLOTTE 28210 704 365-0760
U OF NC

FLEISHMAN, LAWRENCE MARK IM AC
7110 LAWYER'S ROAD 82 85 86
CHARLOTTE 28227 704 568-6500
U OF NC

GIBSON, JOHN MCNEILL IM AC
212 S. TRYON ST., STE. 1500 72 72 84
CHARLOTTE 28202 704 333-6544
U OF NC

GILMOUR, MONROE TAYLOR IM /CD L/RT
1300 BAXTER ST., STE. 163 36 41 41
CHARLOTTE 28204 704 375-0287
HARVARD

GLASGOW, DOUGLAS MCKAY IM /GER L/RT
400 AVINGER LN. #403 43 50 51
DAVIDSON 28036 704 896-1403
MCGILL U

GREENE, RALPH LEON, JR. IM AC
3535 RANDOLPH ROAD 70 74 76
CHARLOTTE 28211 704 365-0760
WEST VA U

GRIGG, CLAUD MCNEILL IM /CD AC
217 TRAVIS AVENUE 61 61 67
CHARLOTTE 28204 704 372-3350
U OF NC

GRUHN, WILLIAM BRYANT IM AC
10724 PARK RD., STE. 208 74 75 81
CHARLOTTE 28210 704 372-8750
DARTMOUTH U

HABER, ROBERT HUGH IM /CD AC
1001 BLYTHE BLVD. #300 83 86 89
CHARLOTTE 28203 704 373-1503
MT SINAI SCH MED

HAGLER, DAN N. IM /ID AC
125 BALDWIN AVE. 82 83 87
CHARLOTTE 28204 704 338-6300
U OF VIRGINIA

HAMATY, DANIEL IM /RHU AC
140 NIBLICK CT. 53 55 79
DENVER 28037 704 372-3714
HAHNEMANN

HOBSON, JACK BROWN IM /HEM AC
125 BALDWIN AVE. 57 57 63
CHARLOTTE 28204 704 374-1696
U OF NC

HODGES, HORACE HAYDEN IM /GE L/RT
17224 DUE WEST DR. 40 40 47
CHARLOTTE 28278 704 588-0828
U OF PENN

HOLEVAS, JOHN GEORGE IM AC
411 BILLINGSLEY RD. #105 85 87 88
CHARLOTTE 28211 704 333-4175
BOWMAN GRAY

IWAOKA, ROBERT S. IM /CD AC
1718 E. 4TH ST., #501 81 81 87
CHARLOTTE 28204 704 347-2024
U OF ILLINOIS

JAMES, CHARLES GREENE IM AC
700 E. STONEWALL ST., STE. 130 53 54 80
CHARLOTTE 28202 704 377-2188
MEHARRY MED COLL

JAMES, RICHARD THOMAS, JR. IM L/RT
217 TRAVIS AVENUE 43 54 54
CHARLOTTE 28204 704 372-3350
U OF PENN

JONES, ALLEN G. IM AC
101 W.T.HARRIS BLVD. STE.C-101 84 85 88
CHARLOTTE 28213 704 547-1462
U OF MISSISSIPPI

JONES, JAMES BUCKNER IM /PUD AC
3535 RANDOLPH ROAD 79 84 85
CHARLOTTE 28211 704 365-0760
VANDERBILT U

JONES, JERRY ANTHONY IM /GE AC
2021 E. 7TH ST. 74 79 86
CHARLOTTE 28204 704 372-9884
MEHARRY MED COLL

KELLEY, THOMAS FRANCIS IM /CD AC
1001 BLYTHE BLVD., STE. 300 83 84 89
CHARLOTTE 28203 704 373-1500
EAST CAROLINA U

KESSEL, STEVEN R. IM AC
1350 S. KINGS DR. 76 76 87
CHARLOTTE 28207
WEST VA U

KOSSOVE, ALBERT ANTHONY IM /NTR L
1530 ELIZABETH AVENUE 38 38 41
CHARLOTTE 28204 704 377-5984
MED COLL OF VA

KOSSOVE, IRENE LEVY IM /GYN L
1530 ELIZABETH AVENUE 39 40 41
CHARLOTTE 28204 704 377-5984
MED COLL OF VA

KRAMER, NORMAN JOHN IM /END AC
3535 RANDOLPH ROAD, STE. 300 65 73 75
CHARLOTTE 28211 704 365-0760
JEFFERSON

LAYTON, DENNIS SHELDON IM AC
RANDOLPH RD. IM ASSOC. 76 77 80
1900 RANDOLPH RD. #812
CHARLOTTE 28207 704 568-6500
WEST VA U

LINDOW, LARRY GENE IM /GP AC
6301 MORRISON BLVD. 68 69 78
CHARLOTTE 28211 704 362-6200
U OF ILLINOIS

LIVINGSTON, MICHAEL BALFOUR IM AC
125 BALDWIN AVE. 84 85 89
CHARLOTTE 28204 704 338-6300
MED U OF SC

MATTHEWS, WILLIAM CAMP IM /OM L/RT
RT. 4, BOX 470, THE FARM 37 37 39
CHESTER, SC 29706 803 385-6975
U OF VIRGINIA

MAYER, WALTER BREM IM L/RT
2420--407 ROSWELL AVENUE 30 32 33
CHARLOTTE 28209 704 333-4322
U OF PENN

MCCALL, MARVIN MATHER, III IM /CD AC
P. O. BOX 32861 56 56 62
CHARLOTTE 28232 704 355-3165
U OF NC

MCDONALD, ROBERT L. IM AC
217 TRAVIS AVE. 85 86 89
CHARLOTTE 28204 704 372-3350
U OF ALABAMA

MCKAY, CLINTON HULL IM L/RT
5135 HARDISON RD. 39 43 47
CHARLOTTE 28226 704 373-0700
U OF TENNESSEE

MCLOUGHLIN, JILL HICKEY IM AC
217 TRAVIS AVE. 83 84 86
CHARLOTTE 28204 704 372-3350
U OF NC

MCMILLAN, THOMAS HENRY, JR. IM AC
1001 BLYTHE BLVD., STE. 500 53 58 58
CHARLOTTE 28203 704 355-5100
EMORY U

MILLER, EDITH HAMILTON IM /END AC
1350 S. KINGS DRIVE 75 76 82
CHARLOTTE 28207 704 372-8750
MED U OF SC

NORRIS, CHARLES BRADLEY IM L/RT
1039 AROSA AVE. 41 41 47
CHARLOTTE 28203 704 334-1506
GEORGETOWN U

O'BAR, PAUL RUPERT IM /ID AC
1350 S. KINGS DRIVE 57 57 71
CHARLOTTE 28207 704 372-8750
U OF OKLAHOMA

ORCUTT, JAMES MICHAEL IM R
8004 SHOREWOOD DR. 90 00 86
CHARLOTTE 28277 704 355-2000
BOWMAN GRAY

PAYNE, ROBERT BENJAMIN IM /CD AC
3535 RANDOLPH ROAD 60 60 64
CHARLOTTE 28211 704 365-0760
U OF NC

PERRIN, THOMAS SAMUEL, JR. IM L
3535 RANDOLPH ROAD 43 52 53
CHARLOTTE 28211 704 365-0760
JOHNS HOPKINS

PORTER, WILLIAM G. IM /HEM AC
PO BOX 32861 63 63 7
CHARLOTTE 28232 704 338-316
MED U OF SC

RANSON, JOHN LESTER, JR. IM L/R
335 N. CASWELL ROAD 42 42 4
CHARLOTTE 28204 704 376-485
JEFFERSON

RAYMOND, KENT HOWARD IM /NEP AC
928 BAXTER ST. 77 79 8
CHARLOTTE 28204 704 374-132
WASHINGTON U

RICH, CHARLES BOYCE, JR. IM AC
212 S. TRYON ST., STE. 1500 82 85 8
CHARLOTTE 28281 704 333-654
BOWMAN GRAY

RICHARDSON, MICHAEL SHELDON IM AC
7810 PROVIDENCE RD., STE. 103 86 90 9
CHARLOTTE 28226 704 592-254
U OF NC

RILEY, JAMES CHARLES IM /GE AC
125 BALDWIN AVE. 67 68 7
CHARLOTTE 28204 704 338-630
TEMPLE U

RITCH, DOUGLAS LAMAR IM AC
335 N. CASWELL ROAD 63 63 6
CHARLOTTE 28204 704 376-485
U OF NC

ROBINSON, GLENN CRANE IM AC
7108 PINEVILLE-MATTHEWS RD. 87 90 9
CHARLOTTE 28226 704 542-195
WEST VA U

ROSS, OTHO B., JR. IM L/R
3022 FERNCLIFF RD. 43 43 5
CHARLOTTE 28211 704 366-782
DUKE

RUPPENTHAL, C. ROBERT, JR. IM /HEM AC
1350 S. KINGS DRIVE 60 68 6
CHARLOTTE 28207 704 372-875
U OF PENN

RUSS, DONALD JAMES IM AC
3535 RANDOLPH ROAD 73 73 7
CHARLOTTE 28211 704 365-076
U OF MARYLAND

SCHOLZ, DAVID GEORGE IM /GE AC
125 BALDWIN AVE. 83 86 8
CHARLOTTE 28204 704 338-630
MAYO MED SCHOOL

SCHUMACHER, DONALD IM AC
335 N. CASWELL ROAD 70 70 7
CHARLOTTE 28204 704 376-485
U OF BOLOGNA

SHAPIRO, MARVIN BERNARD IM /GE AC
1001 BLYTHE BLVD., STE. 500 66 67 7
CHARLOTTE 28203 704 373-070
U OF ALABAMA

SHOAF, EDWIN HUSS, JR. IM AC
491 N. WENDOVER RD. 75 75 7
CHARLOTTE 28211 704 366-729
BOWMAN GRAY

SHULL, WILLIAM HENRY IM L
1900 RANDOLPH ROAD 44 44 4
CHARLOTTE 28207 704 376-483
JEFFERSON

SHULTZ, KIRKWOOD TANNER IM /END AC
101 W. T. HARRIS BLVD. 66 66 7
CHARLOTTE 28213 704 374-169
DUKE

SILBIGER, STEPHEN ALAN IM AC
5516 CENTRAL AVE. 72 73 8
CHARLOTTE 28227 704 551-420
SUNY-SYRACUSE

SIMONTON, CHARLES ALISON, III IM /CD AC
1001 BLYTHE BLVD., STE. 300 80 80 8
CHARLOTTE 28203 704 373-150
HARVARD

SOBEL, GARY ALLEN IM /HEM AC
3830 RIVER RIDGE RD. 73 88 8
CHARLOTTE 28226 704 551-420
K C OSTEO COLL

STUCKEY, CHARLES LEGRAND IM L/R
2634 SHARON ROAD 40 46 4
CHARLOTTE 28211 704 364-090
U OF VIRGINIA

60. MECKLENBURG COUNTY SOCIETY (Continued)

GG, WILLIAM CASWELL, JR. IM /PUD AC 61 62 67
1001 BLYTHE BLVD., STE. 500
CHARLOTTE 28203 704 355-5100
EMORY U

USSAINT, JAMES LYNN IM /GE AC 84 85 90
2015 RANDOLPH RD., STE. 208
CHARLOTTE 28207 704 377-4009
U OF N DAKOTA

OXELL, MARCUS LEE IM /ON C 79 84 90
2015 RANDOLPH RD., STE. 210
CHARLOTTE 28211 704 358-1900
BOWMAN GRAY

RNER, MURRAY WELLS IM /NEP AC 80 81 77
928 BAXTER STREET
CHARLOTTE 28204 704 338-6300
BOWMAN GRAY

ROLER, JAY CARY IM AC 85 86 90
7108 PINEVILLE-MATTHEWS RD.
CHARLOTTE 28226 704 542-1952
MED COLL OF VA

RDONE, GEORGE F. IM /GER L 43 49 49
3800 WENDWOOD LANE
CHARLOTTE 28211 704 338-6300
NEW YORK MED COL

RNER, HUGH DAVID IM L/RT 43 44 49
PO BOX 549
MONTREAT 28757 704 333-6544
JOHNS HOPKINS

EEKS, KENNETH DURHAM, JR. IM /CD AC 74 78 84
1718 E. 4TH ST. #501
CHARLOTTE 28204 704 347-2024
DUKE

HITE, MACK WILLIS, III IM AC 79 80 75
7108 PINEVILLE-MATTHEWS RD.
CHARLOTTE 28226 704 542-1952
U OF NC

ILLIAMS, WILLIAM THOMAS, JR. IM /PD AC 73 73 79
PO BOX 32861
CHARLOTTE 28232 704 355-3146
BAYLOR

OLOZIN, MARK WILLIAM IM /CD AC 84 90 90
2330 RANDOLPH RD.
CHARLOTTE 28207 704 377-0575
BOSTON U

OODARD, WARDEN LEWIS, III IM /ON AC 81 81 82
217 TRAVIS AVE.
CHARLOTTE 28204 704 372-3350
U OF NC

XILLOFACIAL SURGERY

ERRIN, ROBERT ALEXANDER MFS AC 79 80 81
1628 E. MOREHEAD
CHARLOTTE 28207 704 376-0216
UNIV OF NC

UROLOGY

LLEN, FRED HUNTLEY, JR. N AC 59 59 65
1001 BLYTHE BLVD., STE. 601
CHARLOTTE 28203 704 377-9323
COLUMBIA U

ENJAMIN, EUGENE E. N AC 78 85 86
1718 E. 4TH ST., #702
CHARLOTTE 28204 704 334-6085
MCGILL U

AHILL, WILLIAM THOMAS N AC 79 82 89
MECKLENBURG NEURO. ASSOC
1900 RANDOLPH RD., STE. 1010
CHARLOTTE 28207 704 334-7311
GEORGETOWN U

EMAS, RONALD CHARLES N /PM AC 65 66 72
2115 EAST 7TH ST.,STE. 101
CHARLOTTE 28204 704 372-3714
INDIANA U

OLLMER, RONALD LESTER N AC 66 67 76
PO BOX 32861
CHARLOTTE 28232 704 355-4053
TEMPLE U

NESBIT, WILLIAM MICHAEL N AC 62 62 69
2115 E. 7TH ST.
CHARLOTTE 28204 704 333-2853
U OF VIRGINIA

PFEIFFER, FREDERICK EARLY N /IM AC 76 79 86
MECKLENBURG NEURO. ASSOC
1900 RANDOLPH RD., STE. 1010
CHARLOTTE 28207 704 334-7311
VANDERBILT U

PUGH, JAMES EDWIN, JR. N AC 67 69 84
MECKLENBURG NEURO. ASSOC
1900 RANDOLPH RD., STE. 1010
CHARLOTTE 28207 704 334-7311
U OF PENN

SACCO, SARA E. N AC 83 83 89
MECKLENBURG NEURO. ASSOC
1900 RANDOLPH RD., STE. 1010
CHARLOTTE 28207 704 334-7311
U OF FLORIDA

NEPHROLOGY

BURGESS, WILLIAM PATRICK NEP /IM AC 77 78 83
928 BAXTER STREET
CHARLOTTE 28204 704 374-1321
U OF MIAMI

CHANDLER, JOE THURSTON NEP /IM AC 63 63 72
928 BAXTER STREET
CHARLOTTE 28204 704 374-1321
MED U OF SC

DIAZ-BUXO, JOSE ANTONIO NEP /IM AC 70 71 75
928 BAXTER STREET
CHARLOTTE 28204 704 374-1321
U OF PUERTO RICO

FARMER, CHARLES DUDLEY NEP /IM AC 58 58 67
928 BAXTER ST.
CHARLOTTE 28204 704 374-1321
INDIANA U

FRIEDLAND, EDWARD L. NEP /IM AC 81 86 88
2321 W. MOREHEAD ST., STE. 101
CHARLOTTE 28208 704 847-0157
U OF ROCHESTER

WALKER, PHILLIP JACKSON NEP /IM AC 64 64 78
928 BAXTER ST.
CHARLOTTE 28204 704 374-1321
U OF VIRGINIA

NUCLEAR MEDICINE

EASTON, EDWARD JAMES, JR. NM /DR AC 69 71 77
CHARLOTTE RADIOLOGY
PO BOX 36937
CHARLOTTE NC 28236 704 373-2430
TUFTS U

NEONATAL-PERINATAL MEDICINE

BERKOWITZ, GERALD PHILLIP NPM /PD AC 74 74 85
200 HAWTHORNE LANE
P. O. BOX 33549
CHARLOTTE 28233 704 384-4944
U OF TENNESSEE

HICKEY, DOCIA ELIZABETH NPM /PD AC 75 75 80
CAROLINAS MEDICAL CENTER
PO BOX 32861
CHARLOTTE 28232 704 355-3156
BOWMAN GRAY

NEAL, PATRICIA ROSEANNE NPM C 80 83 89
PO BOX 32861
CHARLOTTE 28232 704 355-3156
INDIANA U

RATHBUN, MARY ANNE NPM /PD AC 70 73 78
CAROLINAS MEDICAL CENTER
P. O. BOX 32861
CHARLOTTE 28232 704 355-3156
ALBANY MED COLL

VISSER, VALYA ELIZABETH NPM /PD AC 73 74 85
CAROLINAS MEDICAL CENTER
DEPT. OF PEDIATRICS,BOX 32861
CHARLOTTE 28232 704 355-3156
U OF IOWA

NUCLEAR RADIOLOGY

PARSONS, ROBERT GREGORY NR AC 69 71 76
CHARLOTTE RADIOLOGY
PO BOX 36937
CHARLOTTE 28236 704 355-5401
U OF FLORIDA

ULLRICH, CHRISTOPHER GEORGE NR AC 76 76 86
CHARLOTTE RADIOLOGY
PO BOX 36937
CHARLOTTE 28236 704 365-0343
SUNY-SYRACUSE

NEUROLOGICAL SURGERY

BRAWLEY, BOBBY WATSON NS AC 59 59 72
1010 EDGEHILL RD, NORTH
CHARLOTTE 28207 704 376-1605
U OF NC

FINGER, FREDERICK ELI, III NS AC 76 77 86
1010 EDGEHILL RD. NORTH
CHARLOTTE 28207 704 376-1605
VANDERBILT U

GREENHOOT, JERRY HARVEY NS AC 62 62 73
1010 EDGEHILL ROAD NORTH
CHARLOTTE 28207 704 376-1605
U OF CALIF-LA

GRIVAS, NICHOLAS ELLSWORTH NS AC 65 65 74
1928 RANDOLPH RD. STE. 100
CHARLOTTE 28207 704 377-9312
U TX-SOU.WESTERN

HEAFNER, MICHAEL DANIEL,SR. NS AC 79 84 78
1010 EDGEHILL ROAD, NORTH
CHARLOTTE 28207 704 376-1605
BOWMAN GRAY

HIPP, STEPHEN WALKER NS AC 83 84 89
PRESBYTERIAN MEDICAL TOWER
1718 E. 4TH ST., #901
CHARLOTTE 28204 704 372-8860
U OF NC

LASSITER, KENNETH ROBERT LEE NS AC 61 61 77
PRESBYTERIAN MEDICAL TOWER
1718 E. FOURTH ST. #901
CHARLOTTE 28204 704 372-8860
DUKE

MCLANAHAN, CHARLES SCOTT NS AC 73 74 80
1010 EDGEHILL ROAD, N.
CHARLOTTE 28207 704 376-1605
COLUMBIA U

PETTY, JERRY MILLER NS AC 60 60 69
1010 EDGEHILL ROAD, N.
CHARLOTTE 28207 704 376-1606
U OF NC

PITTS, WILLIAM REID NS /GS L/RT 33 33 40
429 EASTOVER ROAD
CHARLOTTE 28207 704 333-0407
HARVARD

ROGERS, LARRY ARCH NS AC 65 65 74
1010 EDGEHILL ROAD, NORTH
CHARLOTTE 28207 704 376-1605
DUKE

VANDER VEER, CRAIG ANDREW NS AC 79 80 86
1010 EDGEHILL
CHARLOTTE 28207 704 376-1605
CHICAGO MED SCH

OBSTETRICS AND GYNECOLOGY

ANDERSON, JAMES DICK OBG AC 63 63 72
1023 EDGEHILL ROAD, SOUTH
CHARLOTTE 28207 704 373-1541
U OF FLORIDA

ANDRINOPOULOS, GEORGE C. OBG /NPM AC 66 66 84
2028 RANDOLPH RD.
CHARLOTTE 28207 704 372-5800
U OF ATHENS

BLACK, BILLY GENE OBG /AN AC 66 75 79
2711 RANDOLPH RD. #309
CHARLOTTE 28207 704 342-0982
LUDWIG U

60. MECKLENBURG COUNTY SOCIETY (Continued)

BRADFORD, WILLIAMSON Z., JR. OBG AC
150 PROVIDENCE ROAD 57 57 62
CHARLOTTE 28207 704 377-0461
U OF PENN

BROWN, RONALD LAUCHLIN OBG AC
2711 RANDOLPH RD. STE. 305 74 75 84
CHARLOTTE 28207 704 372-8020
MED U OF SC

CAMPBELL, JAMES ARCHIBALD OBG AC
2015 RANDOLPH RD. 60 60 69
CHARLOTTE 28207 704 376-3536
U OF NC

CRADDOCK, LARRY WAYNE OBG AC
449 N. WENDOVER RD. 72 73 80
CHARLOTTE 28211 704 364-3760
U OF ALABAMA

CROWDER, MARY THELMA OBG AC
150 PROVIDENCE RD. 86 88 91
CHARLOTTE 28207 704 377-0461
U OF VIRGINIA

DEHOFF, PHILIP WILLIAM OBG AC
1718 E. 4TH ST., #907 80 81 84
CHARLOTTE 28204 704 365-0470
U OF SOU FLORIDA

DOWNS, POSEY EDGAR, JR. OBG L/RT
16601 ONE HUNDRED NORMAN PL. 52 52 56
HUNTERSVILLE 28078 704 376-1612
BOWMAN GRAY

FISHER, EDWARD CARL OBG AC
449 N. WENDOVER RD. 71 71 78
CHARLOTTE 28211 704 373-1541
U OF TENNESSEE

GLOVER, JOHN SNOW OBG AC
1718 E. FOURTH ST., #307 59 59 65
CHARLOTTE 28204 704 332-8103
DUKE

GODSEY, RALEIGH KIRBY, JR. OBG AC
2711 RANDOLPH RD., STE. 305 86 87 90
CHARLOTTE 28207 704 372-8020
U OF MISSISSIPPI

GRIFFIN, EZRA DANIEL, JR. OBG AC
449 N. WENDOVER ROAD 73 73 77
CHARLOTTE 28211 704 364-3760
U OF NC

HALL, JAMES BRYAN OBG /ON AC
1901 BRUNSWICK 74 75 82
CHARLOTTE 28207 704 331-3149
MED U OF SC

HARDY, JAMES JOSEPH OBG AC
150 PROVIDENCE RD. 85 88 82
CHARLOTTE 28207 704 377-0461
U OF NC

HAROUNY, VICTOR ROBERT OBG AC
150 PROVIDENCE RD. 83 83 88
CHARLOTTE 28207 704 377-0461
CASE WESTERN RES

HARRELL, LONNIE CLAYTON, III OBG AC
150 PROVIDENCE ROAD 72 72 74
CHARLOTTE 28207 704 377-0461
U OF NC

HARRISON, FRANK N.H., JR. OBG AC
PO BOX 32861 73 74 77
CAROLINAS MEDICAL CENTER
CHARLOTTE 28232 704 364-3760
MED COLL OF GA

HARSTON, PHILLIP REED OBG AC
2711 RANDOLPH RD. STE. 512 79 80 84
CHARLOTTE 28207 704 333-4104
U OF LOUISVILLE

HIGHTSHUE, DAVID CLAYTON OBG AC
5970 FAIRVIEW RD., STE. 100 67 67 90
CHARLOTTE 28210 704 551-4232
INDIANA U

HOLLINGSWORTH, WALTER C. OBG AC
1718 E. FOURTH ST., #307 59 59 64
CHARLOTTE 28204 704 332-8103
BOWMAN GRAY

HORNER, DONALD STANLEY OBG /PD AC
431 N. WENDOVER RD. 75 75 83
CHARLOTTE 28211 704 366-8400
U OF MARYLAND

HUGGINS, MARGARET CLAY OBG AC
2711 RANDOLPH RD., STE. 512 82 83 90
CHARLOTTE 28207 704 333-4104
U OF NC

JACKSON, CHARLES THOMAS OBG AC
5970 FAIRVIEW RD. #5950 65 66 85
CHARLOTTE 28210 704 551-4200
U OF ROCHESTER

JONES, O. HUNTER OBG L/RT
232 PERRIN PLACE 33 33 37
CHARLOTTE 28207 704 333-0455
COLUMBIA U

LAND, MICHAEL ROY OBG AC
150 PROVIDENCE ROAD 80 80 80
CHARLOTTE 28207 704 377-0461
INDIANA U

LEWIS, ANDREW JACKSON, JR. OBG AC
2801 RANDOLPH RD. 57 58 62
CHARLOTTE 28211 704 377-5675
U OF ALABAMA

LITTLE, DONALD FORREST OBG AC
1718 E. 4TH ST., #601 59 65 65
CHARLOTTE 28204 704 372-8750
U OF ALABAMA

LUCAS, JACK A. OBG AC
449 N. WENDOVER RD. 82 83 87
CHARLOTTE 28211 704 364-3760
U OF NC

MACDONALD, WILLIAM WEBSTER OBG AC
1023 EDGEHILL DRIVE 68 68 78
CHARLOTTE 28207 704 373-1541
SUNY-SYRACUSE

MCALLISTER, DAVID WHITNEY OBG AC
2711 RANDOLPH RD., STE. 512 70 70 76
CHARLOTTE 28213 704 333-4104
BOWMAN GRAY

MCNAMARA, JOHN FRANCIS, II OBG AC
2711 RANDOLPH ROAD, STE 512 76 77 80
CHARLOTTE 28207 704 333-4104
OHIO STATE U

NUNLEY, WALLACE CLAY, JR. OBG AC
PO BOX 32861 73 77 89
CHARLOTTE 28232 704 355-3153
U OF VIRGINIA

OLIVER, ANDREW BLAINE, JR. OBG AC
101 W. T. HARRIS BLVD. #A323 81 84 84
SUITE A-323
CHARLOTTE 28213 704 547-8359
MED COLL OF GA

OLIVER, KENNETH LEON OBG AC
2801 RANDOLPH RD. 65 66 73
CHARLOTTE 28211 704 377-5675
BOWMAN GRAY

PARKER, GREGORY DEAN OBG AC
1350 S. KINGS DR. 84 84 89
CHARLOTTE 28207 704 342-8000
U OF NC

PETOK, TINA OBG AC
101 W.T.HARRIS BLVD. STE. 4106 84 86 88
UNIVERSITY MEDICAL PARK
CHARLOTTE 28262 704 548-6800
MED COLL OF OHIO

PIXLEY, ROLAND L. OBG AC
150 PROVIDENCE RD. 83 83 88
CHARLOTTE 28207 704 377-0461
BOWMAN GRAY

PIXLEY, ROLAND THEO OBG AC
1023 EDGEHILL ROAD, SOUTH 46 46 53
CHARLOTTE 28207 704 373-1541
ST U OF NY-BUFF

PORTER, CHARLES ALEXANDER OBG AC
2801 RANDOLPH RD., STE 200 66 66 73
CHARLOTTE 28211 704 377-5675
JEFFERSON

POWE, CHARLES EDWIN, JR. OBG AC
1718 E. 4TH ST., #907 58 63 64
CHARLOTTE 28204 704 365-0470
MED U OF SC

SAMUELS, WALTER RAY OBG AC
150 PROVIDENCE ROAD 61 61 68
CHARLOTTE 28207 704 377-0461
U OF NC

SHIRLEY, ROBERT E.L., JR. OBG AC
2015 RANDOLPH RD. #101 69 75 7
CHARLOTTE 28207 704 376-353
MED COLL OF GA

STALLWORTH, WILLIAM KING OBG AC
2711 RANDOLPH RD.#305-A 59 63 6
CHARLOTTE 28207 704 372-802
TULANE U

STEPHENS, KATHRYN JOHNSON OBG AC
1718 E. FOURTH ST. #201 78 78 7
CHARLOTTE 28204 704 338-975
U OF NC

TAYLOR, JOHN BRUCE OBG AC
449 N. WENDOVER RD. 78 80 8
CHARLOTTE 28211 704 376-036
MED COLL OF VA

TIDWELL, JOHN WILLIAM, II OBG AC
2801 RANDOLPH RD., STE. 200 65 66 7
CHARLOTTE 28211 704 377-567
U OF MICHIGAN

VANDIVER, THOMAS JACKSON OBG AC
150 PROVIDENCE ROAD 76 78 8
CHARLOTTE 28207 704 377-046
EMORY U

VERROSS, WILLIAM EDWARD OBG AC
449 N. WENDOVER RD. 74 75 8
CHARLOTTE 28211 704 364-376
MED COLL OF GA

WADE, RONALD VAUGHN OBG AC
PO BOX 32861 70 70 8
CHARLOTTE 28232 704 338-315
MED U OF SC

WARD, SIMON V., III OBG AC
2711 RANDOLPH RD. STE. 305 81 81 8
CHARLOTTE 28207 704 372-802
LA STATE U

WHITE, THOMAS HUGH OBG AC
1718 E. FOURTH ST. #307 59 59 6
CHARLOTTE 28204 704 332-810
DUKE

WHITESIDE, JOHN HARVEY OBG AC
150 PROVIDENCE ROAD 57 57 7
CHARLOTTE 28207 704 377-046
U OF TORONTO

WINGERT, JOHN GEORGE OBG AC
2015 RANDOLPH RD. 55 65 6
CHARLOTTE 28207 704 376-353
U OF IOWA

WOOD, STACEY A., JR. OBG AC
2015 RANDOLPH RD. 83 84 8
CHARLOTTE 28207 704 376-353
DUKE

OCCUPATIONAL MEDICINE

ALBERGOTTI, JULIAN S., JR. OM /FP AC
SOUTHERN BELL MED. DEPT. 55 55 5
ROOM 414 SNC-PO BOX 30188
CHARLOTTE 28230 704 378-732
U OF NC

ALEXANDER, JAMES PORTER OM /IM AC
DUKE POWER CO. 50 50 5
PO BOX 1007, WCO8C
CHARLOTTE 28201 704 373-432
U OF PENN

BEARD, JOHN NICHOLS OM /PD AC
1350 KINGS DRIVE 64 64 7
CHARLOTTE 28207 704 372-875
U OF NC

BREWSTER, VANN ALLEN OM /GP
5308 HILLINGDON RD. 60 60 8
CHARLOTTE 28226 704 542-758
MED COLL OF GA

SHULTZABERGER, L. Z. OM /FP R
7001 SUMMER PL. 51 53 C
CHARLOTTE 28213 704 596-507
HAHNEMANN

SODEN, KEVIN JOSEPH OM /EM AC
7019 WHITEMARSH COURT 74 75 8
CHARLOTTE 28210 704 554-265
U OF FLORIDA

60. MECKLENBURG COUNTY SOCIETY (Continued)

CCOLOGY

)YD, JAMES FRANCIS ON /HEM AC
2015 RANDOLPH RD. #210 74 76 85
CHARLOTTE 28207 704 358-1900
DUKE

ENNING, ROBERT LAWRENCE ON /HEM AC
3535 RANDOLPH ROAD 64 64 69
CHARLOTTE 28211 704 365-0760
U OF VERMONT

AUCH, THOMAS WRAY ON /HEM AC
MECKLENBURG MEDICAL GROUP 72 77 79
3535 RANDOLPH RD. #W300
CHARLOTTE 28211 704 365-0760
NORTHWESTERN U

IALINGER, ALAN ROBERT ON /IM AC
3535 RANDOLPH ROAD 72 72 79
CHARLOTTE 28211 704 365-0760
U OF VIRGINIA

THALMOLOGY

EDRICK, JAMES JOSEPH OPH AC
2015 RANDOLPH RD. 77 79 83
CHARLOTTE 28207 704 334-2020
U OF NC

OURGEOIS, JOHN ELLIOTT OPH AC
1600 E. THIRD ST. 79 82 85
CHARLOTTE 28204 704 372-3300
U OF VIRGINIA

RANNER, WILLIAM A., III OPH AC
4335 COLWICK RD. 86 88 91
CHARLOTTE 28211 704 364-7400
UNIV OF NC

ROWN, MARTIN TODD OPH AC
1718 E. FOURTH ST. #207 86 00 90
CHARLOTTE 28204 704 377-3689
U OF NC

ROWNING, DAVID JUDSON OPH AC
1600 E. THIRD ST. 81 82 87
CHARLOTTE 28204 704 358-4138
DUKE

ULLINGTON, WALTER GRAHAM OPH /AM AC
4335 COLWICK RD. 57 58 66
CHARLOTTE 28211 704 364-7400
MED COLL OF VA

HILDERS, MELVIN DAVIS, JR OPH AC
1928 RANDOLPH RD., STE. 109 58 62 62
CHARLOTTE 28207 704 372-3070
MED COLL OF VA

HRISTENBURY, JONATHAN DAVID OPH/PS AC
1900 RANDOLPH RD. STE. 706 80 81 83
CHARLOTTE 28207 704 332-9365
DUKE

ULTON, JULIAN CLARK OPH AC
1600 E. THIRD STREET 56 56 63
CHARLOTTE 28204 704 372-3300
DUKE

ALENTINE, PAUL GUY, III OPH AC
2620 E. 7TH ST. #300 76 77 85
CHARLOTTE 28204 704 364-8576
DUKE

ASKIN, ERNEST REED OPH AC
100 QUEENS RD. 51 52 56
CHARLOTTE 28204 704 332-1156
EMORY U

ASKIN, LEWIS REED OPH AC
100 QUEENS RD. 80 84 85
CHARLOTTE 28204 704 332-1156
EMORY U

RAHAM, WALTER RALEIGH OPH L/RT
743 HEMPSTEAD PLACE 40 40 50
CHARLOTTE 28207 704 334-6014
U OF MARYLAND

REENMAN, MAXWELL OPH AC
309 S. LAUREL AVENUE 67 68 74
CHARLOTTE 28207 704 372-4380
NEW YORK U

ALL, SUSAN MARIE OPH AC
2015 RANDOLPH RD., STE. 108 84 88 90
CHARLOTTE 28207 704 334-2020
U OF TX-HOUSTON

HOUGH, MAC JOHNSON OPH L/RT
3234 PARK ROAD 45 52 53
CHARLOTTE 28209 704 364-9354
MED COLL OF VA

JABEN, SCOTT LEONARD OPH AC
309 S. LAUREL AVE. 77 78 83
CHARLOTTE 28207 704 372-4380
U OF MIAMI

KRESHON, MARTIN JOHN OPH AC
1600 E. THIRD STREET 54 57 61
CHARLOTTE 28204 704 358-4111
M C OF WISCONSIN

KRUG, JOSEPH HOFFMANN, JR. OPH AC
2620 E. 7TH ST., STE. 300 82 82 90
CHARLOTTE 28204 704 377-4448
COLUMBIA U

LYMBERIS, MARVIN NICHOLAS OPH L/RT
2514 RED FOX TRAIL 41 47 48
CHARLOTTE 28211 704 366-6227
TULANE U

MALTON, MARK L. OPH AC
8730 UNIVERSITY CITY BLVD. 82 85 88
CHARLOTTE 28213 704 334-2020
U OF MICHIGAN

MARSHALL, CHARLES FOSTER, JR. OPH AC
1718 E. 4TH ST. #208 69 69 79
CHARLOTTE 28204 704 376-6511
MED U OF SC

MCCURDY, DONALD PITTARD OPH AC
2200 E. 7TH ST. 77 77 81
CHARLOTTE 28204
U OF NC

PARKERSON, WALTER TUCK OPH AC
1718 E. FOURTH ST., STE. 207 60 60 68
CHARLOTTE 28204 704 377-3689
DUKE

PRESSLY, JAMES PATTERSON OPH AC
2620 E. 7TH ST. STE 300-C 68 68 77
CHARLOTTE 28204 704 377-4448
MED U OF SC

RENALDO, DONALD PHILIP OPH AC
1718 E. FOURTH ST. #908 74 75 80
CHARLOTTE 28204 704 376-5424
TEMPLE U

RIDLEY, MIRIAM E. OPH AC
1718 E. FOURTH ST. #908 75 80 88
CHARLOTTE 28204 704 376-5424
U OF W ONTARIO

SAUNDERS, TIMOTHY GRAY OPH AC
1600 E. THIRD ST. 81 81 81
CHARLOTTE 28204 704 358-4111
U OF NC

STOWE, CLEVELAND OPH AC
9600 E. THIRD ST. 76 77 84
CHARLOTTE 28204 704 358-4135
BOWMAN GRAY

STRATTON, JAMES DAVID OPH L/RT
5150 SHARON ROAD 37 38 47
CHARLOTTE 28210 704 554-7176
RUSH MED COLL

TILLETT, CHARLES WALTER, JR. OPH L/RT
2130 SHARON LANE 46 46 55
CHARLOTTE 28211 704 366-6895
JOHNS HOPKINS

TILLETT, GRACE MONTANA OPH /R L/RT
2130 SHARON LANE 49 54 55
CHARLOTTE 28211 704 366-6895
SUNY-SYRACUSE

UGLAND, DAVID NELS OPH AC
100 QUEENS RD. 80 80 86
CHARLOTTE 28204 704 332-1156
BAYLOR

WOODY, JOE HARRIS OPH AC
4335 COLWICK RD. 58 58 65
CHARLOTTE 28211 704 364-7400
BOWMAN GRAY

YOUNG, JOHN ADAM, II OPH AC
1600 E. THIRD STREET 60 60 67
CHARLOTTE 28204 704 372-3300
U OF NC

YUDELL, ROBERT BENJAMIN OPH AC
309 S. LAUREL AVENUE 54 57 61
CHARLOTTE 28207 704 372-4380
DUKE

ORTHOPEDIC SURGERY

ABDA, SANDRA MARIE ORS
10724-208 PARK RD. 73 74 79
MERCY MEDICAL PK.
CHARLOTTE 28210 704 541-3055
MED COLL OF PENN

ANDERSON, ROBERT BENTLEY ORS AC
1001 BLYTHE BLVD.,#200 83 84 89
CHARLOTTE 28203 704 373-0544
M C OF WISCONSIN

BACH, PHILIP JOHN ORS AC
120 PROVIDENCE ROAD 66 66 71
CHARLOTTE 28207 704 377-0351
U OF WISCONSIN

BARRON, JERRY LYNN ORS AC
1001 BLYTHE BLVD. #200 84 87 90
MILLER ORTHOAEDIC CLINIC
CHARLOTTE 28203 704 373-0544
U OF TEXAS

BEAVER, WALTER BURNS, JR. ORS AC
1001 BLYTHE BLVD., #200 84 89 89
CHARLOTTE 28203 704 373-0544
U OF NC

BOYD, BASIL MANLY, JR. ORS AC
1001 BLYTHE BLVD., #200 53 53 58
CHARLOTTE 28203 704 373-0544
BOWMAN GRAY

BRIGHAM, CRAIG D. ORS AC
1001 BLYTHE BLVD., #200 82 83 88
CHARLOTTE 28203 704 373-0544
NORTHWESTERN U

BUTER, THOMAS HENRY ORS AC
120 PROVIDENCE ROAD 75 76 81
CHARLOTTE 28207 704 377-0351
U OF MICHIGAN

CAUGHRAN, JOHN HAMILTON ORS AC
120 PROVIDENCE ROAD 51 58 59
CHARLOTTE 28207 704 377-0351
INDIANA U

CHAPMAN, TODD MASTERS ORS AC
1001 BLYTHE BLVD., #200 79 79 77
CHARLOTTE 28203 704 373-0544
BOWMAN GRAY

CHEWNING, SAMUEL JACKSON, JR. ORS AC
1001 BLYTHE BLVD., #200 79 80 84
CHARLOTTE 28203 704 372-9820
U OF KENTUCKY

D'ALESSANDRO, DONALD F. ORS AC
1001 BLYTHE BLVD., #200 83 00 89
CHARLOTTE 28203 704 373-0544
GEORGETOWN U

DARDEN, BRUCE VAIDEN, II ORS AC
2600 E. 7TH ST. 82 83 79
CHARLOTTE 28204 704 372-9820
U OF NC

DICKERSON, LEON ARCHIBALD, JR. ORS AC
2600 E. 7TH ST. 70 74 78
CHARLOTTE 28204 704 372-9820
WEST VA U

DIVERIS, JOHN MICHAEL ORS AC
701 E. ROOSEVELT BLVD. 81 82 90
MONROE 28110 704 541-3055
NORTHWESTERN U

DUNAWAY, HOWARD YATES, III ORS AC
120 PROVIDENCE RD. 77 79 84
CHARLOTTE 28207 704 377-0351
BOWMAN GRAY

DUPUY, DAVID NORRIS ORS AC
3535 RANDOLPH ROAD 70 71 76
CHARLOTTE 28211 704 365-2111
U OF MIAMI

ESTWANIK, JOSEPH JOHN ORS /SM AC
325 BILLINGSLEY RD. #201 73 73 78
CHARLOTTE 28211 704 334-4663
BOWMAN GRAY

FEHRING, THOMAS K. ORS AC
120 PROVIDENCE ROAD 80 80 86
CHARLOTTE 28207 704 377-0351
U OF TEXAS

FRIEDRICH, THOMAS CHARLES ORS AC
1104 OAK HILL DR. 79 79 86
MONROE 28110 704 289-4595
INDIANA U

60. MECKLENBURG COUNTY SOCIETY (Continued)

GAUL, JOHN S., III ORS /HS AC
2600 E. 7TH ST. 82 84 88
CHARLOTTE 28204 704 372-9820
U OF NC

GAUL, JOHN STUART, JR. ORS /HS AC
2600 E. 7TH ST. 46 46 53
CHARLOTTE 28204 704 372-9820
TEMPLE U

GILBERT, PAUL PRESSLY ORS AC
2300-B RANDOLPH ROAD 77 78 84
CHARLOTTE 28207 704 375-5955
DUKE

GILL, LOWELL HARLEY ORS AC
1001 BLYTHE BLVD. #200 70 70 77
CHARLOTTE 28203 704 373-0544
DUKE

GRIFFIN, WILLIAM LEWIS ORS AC
120 PROVIDENCE RD. 82 87 89
CHARLOTTE 28207 704 377-0351
U OF LOUISVILLE

GRIFFIN, WILLIAM RUSSELL, JR. ORS AC
3535 RANDOLPH ROAD, STE. 103 64 64 71
CHARLOTTE 28211 704 365-2111
BOWMAN GRAY

HANLEY, EDWARD N., JR. ORS AC
PO BOX 32861 75 76 89
CHARLOTTE MEM. HOSP.
CHARLOTTE 28232 704 355-4257
U OF VERMONT

HEINIG, CHARLES FREDERICK ORS /GS RT
BOX 91 55 61 61
WARE NECK, VA 23178 704 373-0544
SUNY-SYRACUSE

HICKS, J. ROBINSON ORS AC
2600 E. 7TH ST. 53 60 61
CHARLOTTE 28204 704 372-9820
U OF VIRGINIA

HUMPHRIES, DAVID SCOTT ORS AC
1350 S. KINGS DRIVE 56 67 68
CHARLOTTE 28207 704 342-8000
MED COLL OF VA

HUTCHINSON, FORNEY, III ORS /HS AC
1001 BLYTHE BLVD., #200 68 68 77
CHARLOTTE 28203 704 373-0544
DUKE

JOHNSTON, DAVID SOMERS ORS /SM AC
1001 BLYTHE BLVD., #200 61 61 67
CHARLOTTE 28203 704 373-0544
U OF TENNESSEE

JOYCE, DONALD GEORGE ORS AC
3535 RANDOLPH ROAD, SUITE 103 63 67 68
CHARLOTTE 28211 704 365-2111
U OF OTTAWA

KELLAM, DONALD SWIFT, JR. ORS RT
2225 CARMEL RD. 55 60 61
CHARLOTTE 28226 704 377-0351
GEO WASHINGTON U

KING, JOSEPH JOHN ORS
10724-208 PARK RD. 73 73 00
MERCY MEDICAL PK.
CHARLOTTE 28210 704 541-3055
JEFFERSON

LOVEJOY, STEVEN ARNET ORS AC
120 PROVIDENCE RD. 80 81 85
CHARLOTTE 28207 704 372-0743
WEST VA U

MAUERHAN, DAVID ROBERT ORS AC
1001 BLYTHE BLVD., #200 78 79 84
CHARLOTTE 28203 704 373-0544
U OF CINCINNATI

MCBRIDE, ROBERT BENNIS, JR. ORS AC
101 W. T. HARRIS BLVD. #220A 80 81 85
CHARLOTTE 28262 704 547-1552
WEST VA U

MCBRYDE, ANGUS MURDOCH, JR. ORS AC
120 PROVIDENCE RD. 63 63 71
CHARLOTTE 28207 704 377-0351
DUKE

MCCOY, THOMAS HATTON ORS AC
2600 E. 7TH ST. 81 82 86
PO BOX 35228
CHARLOTTE 28235 704 372-9820
U OF NC

MILLER, ROBERT EVANS ORS L/RT
825 ARDSLEY RD. 48 48 55
CHARLOTTE 28207 704 373-0544
U OF PENN

MILTON, CECIL JEROME ORS AC
1718 E. FOURTH ST. STE. 701 56 56 63
PRESBYTERIAN MEDICAL TOWER
CHARLOTTE 28204 704 334-0809
BOWMAN GRAY

MOKRIS, JEFFREY GEORGE ORS AC
1001 BLYTHE BLVD., #200 79 79 80
CHARLOTTE 28203 704 373-0544
U OF CINCINNATI

MOORE, THOMAS JOSEPH ORS AC
1001 BLYTHE BLVD., #200 75 75 86
CHARLOTTE 28203
LOYOLA U

MOOREFIELD, WM. GUERRANT, JR. ORS AC
120 PROVIDENCE ROAD 69 69 77
CHARLOTTE 28207 704 377-0351
DUKE

OHL, MATTHEW DAVID ORS AC
101 W. T. HARRIS BLVD.STE.220 84 85 90
CHARLOTTE 28262 704 547-1552
WEST VA U

OWEIDA, SAMI JOSEPH ORS AC
1900 RANDOLPH RD. STE. 410 79 85 86
CHARLOTTE 28207 704 339-0081
U OF PITTSBURGH

PERLIK, PAUL C. ORS /HS AC
120 PROVIDENCE RD. 78 80 89
CHARLOTTE 28207 704 377-0351
EASTERN VA

PERRY, GLENN BRADFORD ORS /TRS AC
1001 BLYTHE BLVD. #200 78 79 84
CHARLOTTE 28203 704 373-0544
TEMPLE U

PRESSLY, JAMES ALLEN ORS AC
2300 RANDOLPH RD. S-B 66 66 74
CHARLOTTE 28207 704 375-5955
U OF NC

PRICE, GRADY EDWIN ORS AC
120 PROVIDENCE RD. 60 60 69
CHARLOTTE 28207 704 377-0351
DUKE

RHYNE, ALFRED LEONARD, III ORS AC
2600 E. 7TH STREET 84 85 90
CHARLOTTE 28204 704 372-9820
U OF NC

ROPER, JOHN TRACY ORS AC
2300 HOPEDALE AVE. 55 55 65
CHARLOTTE 28207 704 377-4907
MED U OF SC

SIMS, STEPHEN HUBERT ORS AC
10620 PARK RD., STE. 126 83 85 89
CHARLOTTE 28210 704 542-5206
MED U OF SC

VESANO, JACK LEE ORS AC
1718 E. 4TH ST., STE. 701 68 68 73
CHARLOTTE 28204 704 334-0809
WEST VA U

WARD, WILLIAM ALAN ORS AC
1001 BLYTHE BLVD., #200 79 79 86
CHARLOTTE 28203 704 373-0544
U OF PITTSBURGH

WOOD, KENNETH ERVIN ORS AC
2600 EAST 7TH ST. 70 71 78
CHARLOTTE 28204 704 372-8750
U OF FLORIDA

WRENN, RICHARD NICKLES ORS AC
CHARLOTTE MEM. HOSP. 47 55 56
PO BOX 32861
CHARLOTTE 28232 704 338-4257
DUKE

ZUCKER, JOSEPH ORS AC
1350 S. KINGS DR. 79 80 84
CHARLOTTE 28207 704 342-8343
DALHOUSIE U

OTHER SPECIALTY

GAUNT, GEORGE LOREN, JR. OS /CLP AC
2034 RANDOLPH RD. 82 83 84
CHARLOTTE 28207 704 372-4600
YALE

OTOLARYNGOLOGY

ARMSTRONG, BEVERLY WELLER OTO L/F
3034 HAMPTON RD. 41 48
CHARLOTTE 28207 704 366-09
SUNY-SYRACUSE

BERRYHILL, BRUCE HOLT OTO A
1600 E. THIRD STREET 64 64
CHARLOTTE 28204 704 372-33
U OF NC

BOLZ, EVERETT ARTHUR OTO A
3535 RANDOLPH RD., STE. 210 66 66
CHARLOTTE 28211 704 365-07
OHIO STATE U

BURNS, STANLEY SHERMAN, JR. OTO A
1600 E. THIRD STREET 48 54
CHARLOTTE 28204 704 358-41
HARVARD

COMPTON, KENNETH W. OTO A
3535 RANDOLPH RD., STE. 210 81 83
CHARLOTTE 28211 704 365-07
UNIV. OF S.C.

DENNIS, RONALD GREENE OTO A
3535 RANDOLPH RD., STE. 210 71 71
CHARLOTTE 28211 704 365-07
BOWMAN GRAY

DICKSON, F. KEELS OTO /A A
485 N. WENDOVER RD. 67 67
CHARLOTTE 28211 704 366-79
MED U OF SC

DORENBUSCH, ALFRED ADOLPH OTO L/
2732 HAMPTON AVE. 40 40
CHARLOTTE 28207 704 334-04
U OF LOUISVILLE

FELKNER, RICHARD S. OTO A
1600 E. THIRD STREET 60 67
CHARLOTTE 28204 704 358-41
WASHINGTON U

FOUST, JOHN WORTH OTO A
3535 RANDOLPH RD., STE. R210 55 55
CHARLOTTE 28211 704 365-07
U OF NC

GOLDBERG, TREVOR IAN OTO A
1600 E. THIRD STREET 75 78
CHARLOTTE 28204 704 372-33
U-WITWATERSRAND

HOWELL, NELSON NEIL OTO /HNS A
3535 RANDOLPH RD., STE. 210 66 66
CHARLOTTE 28211 704 365-07
U OF NC

KAMERER, DONALD B., JR. OTO /HNS A
1350 S. KINGS DR. 82 82
CHARLOTTE 28207 704 372-87
HARVARD

KOCONIS, CHRIST ALEXATOS OTO /HNS A
1350 KINGS DRIVE 62 62
CHARLOTTE 28207 704 342-80
OHIO STATE U

LINK, MELVIN ROBERT OTO L/
3323 STANWYCK COURT 42 50
CHARLOTTE 28211 704 364-21
U OF LOUISVILLE

MALLONEE, MICHAEL STEVEN OTO /HNS A
8736 UNIVERISYT CITY BLVD. 73 74
UNIVERSITY HEAD & NECK, PA
CHARLOTTE 28213 704 547-1
U OF MIAMI

MILTICH, MICHAEL FIEGEL OTO /HNS A
1600 E. THIRD STREET 78 79
CHARLOTTE 28204 704 358-4
WAYNE STATE U

NASH, HOKE SMITH, JR. OTO A
1600 E. THIRD STREET 54 61
CHARLOTTE 28204 704 358-4
VANDERBILT U

60. MECKLENBURG COUNTY SOCIETY (Continued)

BERSON, GEORGE DON OTO /A AC
3535 RANDOLPH RD., STE. 210 58 64 64
CHARLOTTE 28211 704 365-0711
MED COLL OF VA

AVER, EDWARD FRANKLIN, JR. OTO AC
718 E. FOURTH ST., #303 59 64 64
CHARLOTTE 28204 704 376-8436
TULANE U

EIGEL, MARK TURNER OTO /FPS AC
3736 UNIVERSITY CITY BLVD. 83 84 90
CHARLOTTE 28213 704 547-1609
N E OHIO U

CHIATRY

OWN, VASCUE O'NEIL P AC
3532 MOUNTAINBROOK ROAD 65 65 71
CHARLOTTE 28210 704 553-1179
BOWMAN GRAY

RQUEST, BRET P AC
3404 CARMEL RD., STE. 202 61 61 86
CHARLOTTE 28226 704 541-0800
U OF MIAMI

UDLE, JOHN ALLEN P AC
1900 RANDOLPH RD., STE. 918 67 67 72
CHARLOTTE 28207 704 333-7722
BOWMAN GRAY

ANDALL, ROBERT GORDON P AC
1900 RANDOLPH RD. STE. 900 56 56 82
CHARLOTTE 28207 704 333-7722
DALHOUSIE U

NNY, KEVIN M. P AC
1900 RANDOLPH RD. 80 81 84
CHARLOTTE 28207 704 333-7722
CASE WESTERN RES

LLINGHAM, WILLIAM STEPHEN P AC
479 N. WENDOVER RD. 66 66 80
CHARLOTTE 28211 704 365-3185
DUKE

RNBLAZER, GEORGE HENRY P AC
1332 HARDING PLACE 77 78 85
CHARLOTTE 28204 704 342-2577
WEST VA U

SHER, MARSHALL LOUIS P L/RT
140 E. 83RD ST., APT. 11-C 35 35 52
NEW YORK, NY 10028 212 535-8747
U OF ILLINOIS

X, JOE THOMAS, JR. P AC
1900 RANDOLPH ROAD 60 60 66
CHARLOTTE 28207 704 333-7722
U OF NC

NDRA, JILL LYNNE P AC
7401 DELTA LANE 81 81 89
CHARLOTTE 28215 704 358-2700
MI. ST U-OST MED

GHLEY, FRANK SHAPLEY P AC
427 S. SHARON AMITY RD. #B 79 79 80
CHARLOTTE 28211 704 362-0866
U OF VIRGINIA

LBROOK, WILLIAM DOUGLAS P L/RT
34 LUVAN WAY 46 47 50
DEBORDIEU COLONY
GEORGETOWN, SC 29440
BOWMAN GRAY

LSCHER, EDWARD CHARLES P /CHP AC
1900 RANDOLPH ROAD, SUITE 918 65 65 76
CHARLOTTE 28207 704 333-7724
U OF MISSOURI

MPHREY, JOHN EDWARD, JR. P AC
2040 RANDOLPH RD. 75 76 86
CHARLOTTE 28207 704 334-0875
DUKE

ALINA, KENT MICHAEL P /ALD AC
1515 MOCKINGBIRD LN., STE. 801 79 80 83
CHARLOTTE 28209 704 523-6872
U OF NC

NE, JERALD PAUL P AC
1900 RANDOLPH RD., STE. 918 63 63 75
CHARLOTTE 28207 704 333-7722
U OF MISSOURI

LOMBARDI, VINCENT A. P AC
1900 RANDOLPH RD. STE. 900 80 81 89
CHARLOTTE 28207 704 333-7722
U OF PITTSBURGH

MUNDLE, LINDA BICK P AC
RT. #1, BOX 193 85 85 90
MOORESVILLE 28115 704 896-8612
EAST CAROLINA U

MUNDORF, GEORGE P L/RT
6001 HEMBY ROAD 46 47 53
MATTHEWS 28105 704 846-1276
BOWMAN GRAY

NESBIT, FREDERICK P AC
1012 S. KINGS DR., STE. 925 53 57 77
CHARLOTTE 28283 704 333-7722
U OF GENEVA

POWELL, JAMES MEYERS, JR. P /CHP AC
2315 RANDOLPH ROAD 68 68 78
CHARLOTTE 28207 704 377-4243
U OF NC

SHORT, EARL DEGREY, JR., P AC
501 BILLINGSLEY RD. 59 59 81
CHARLOTTE 28211 704 358-2700
MED U OF SC

TOMSYCK, REBECCA R. P /CHP AC
1900-918 RANDOLPH RD. 78 81 88
CHARLOTTE 28207 704 333-7722
BOWMAN GRAY

WALLACE, J. W. SCOTT P AC
2040 RANDOLPH RD. 83 84 87
CHARLOTTE 28207 704 334-0875
WEST VA U

WESSON, LYNN ELISE P /U AC
1900 RANDOLPH RD., STE. 900 78 83 90
CHARLOTTE 28207 704 333-7726
U OF NC

PEDIATRICS

ALDERMAN, JAMES F. PD AC
1700 ABBEY PLACE 82 82 88
CHARLOTTE 28209 704 523-7232
MED U OF SC

ALMQUIST, PERRY F. PD AC
1700 ABBEY PLACE 82 85 87
CHARLOTTE 28209 704 523-7232
U OF VIRGINIA

ANDERSON, JACK D. PD AC
1350 S. KINGS DR. 71 72 87
CHARLOTTE 28207 704 342-8200
NORTHWESTERN U

BARTHOLOMEW, CYNTHIA L. PD AC
7108 PINEVILLE-MATTHEWS RD. 82 83 87
CHARLOTTE 28226 704 542-1952
HAHNEMANN

BRADY, JOSEPH LAWRENCE, JR. PD /NPM AC
PO BOX 33549 82 82 81
CHARLOTTE 28233 704 384-4944
U OF NC

BRYAN, W. BLAIR PD AC
1700 ABBEY PLACE 56 56 62
CHARLOTTE 28209 704 523-7232
DUKE

BRYANT, WILLIAM FRANKLIN, JR. PD AC
1700 ABBEY PLACE 58 58 63
CHARLOTTE 28209 704 523-7232
DUKE

BURKE, PATRICK PD AC
5950 FAIRVIEW RD. STE. 100 77 78 86
3 FAIRVIEW PLAZA
CHARLOTTE 28210 704 551-4200
HAHNEMANN

CLEGG, HERBERT WILLIAM, II PD /ID AC
2711 RANDOLPH RD. STE. 501 75 76 83
CHARLOTTE 28207 704 374-1747
DUKE

COBEY, WILLIAM GRAY PD AC
2024 RANDOLPH ROAD 53 56 56
CHARLOTTE 28207 704 375-4453
DUKE

COUNCIL, JOHN CROMARTIE, JR. PD AC
427 N. WENDOVER RD. 61 61 68
CHARLOTTE 28211 704 364-3740
U OF NC

CULPEPPER, FRED CARROLL, III PD AC
427 N. WENDOVER RD. 67 67 73
CHARLOTTE 28211 704 333-6659
LA STATE U

DHANDE, VIJAY G. PD /NPM AC
PO BOX 33549 76 79 88
PRESBYTERIAN HOSP.
CHARLOTTE 28233 704 371-4944
B J MED COLLEGE

DUDLEY, ALLISON JOHNSON PD AC
2317 RANDOLPH ROAD 78 79 77
CHARLOTTE 28207 704 376-5572
U OF NC

EICHENBRENNER, TIMOTHY JOHN PD AC
411 BILLNGSLEY RD. #101 79 82 82
PEDIATRIC & TEENAGE MEDICINE
CHARLOTTE 28211 704 332-8111
EASTERN VA

FISHER, DAVID GEORGE PD /NPM AC
PO BOX 32861 83 85 89
CHARLOTTE MEM. HOSP.
CHARLOTTE 28232 704 355-3156
MED COLL OF VA

GAY, CHARLES HOUSTON PD L/RT
3420 SHAMROCK DR. 33 36 38
CHARLOTTE 28215 704 333-7479
DUKE

GLASS, LARRY THOMAS PD AC
7108 PINEVILLE-MATTHEWS RD. 77 78 89
NALLE CLINIC
CHARLOTTE 28226 704 542-1952
GEORGETOWN U

GRODE, MICHAEL JAMES PD AC
149 PROVIDENCE ROAD 66 74 74
CHARLOTTE 28207 704 372-6525
EMORY U

HOLLADAY, GLENN CLYDE PD AC
2711 RANDOLPH RD., STE. 301 80 82 84
CHARLOTTE 28207 704 332-6332
MED U OF SC

JOHNSTON, JOHN GARDNER PD AC
1700 ABBEY PLACE 69 69 75
CHARLOTTE 28209 704 523-7232
U OF NC

KUESER, THOMAS JOSEPH PD /NPM AC
PO BOX 32861 80 88 90
CAROLINAS MEDICAL CENTER
CHARLOTTE 28232 704 355-3156
ST LOUIS U

LINDERMAN, JAMES ALAN PD AC
167-L S. TRADE ST. 76 76 82
PO BOX 2564
MATTHEWS 28106 704 847-0572
INDIANA U

LUCAS, ROBERT THEODORE, JR. PD AC
1350 KINGS DRIVE 54 59 60
CHARLOTTE 28207 704 342-8200
TULANE U

MANGE, STEPHEN KENNEDY PD AC
PO BOX 1570 80 83 86
DAVIDSON 28036 704 892-7905
U OF SOU ALA

MARTIN, EDWARD STEPHENS PD AC
2711 RANDOLPH ROAD, SUITE 501 69 69 72
CHARLOTTE 28207 704 374-1736
U OF PENN

MARTINEZ, MARIA D. PD C
8806 BRASS BELL CT. 84 89 88
CHARLOTTE 28227 704 548-5800
U OF NAVARRA

MCLEAN, MALCOLM PD AC
2711 RANDOLPH RD. STE. 307 56 56 62
CHARLOTTE 28207 704 332-6625
U OF NC

MCLEOD, JONNIE HORN PD AC
1504 BILTMORE DR. 49 52 72
CHARLOTTE 28207 704 547-2171
TULANE U

60. MECKLENBURG COUNTY SOCIETY (Continued)

MOORE, DAVID HUDDLER PD /ID AC 76 76 81
7110 LAWYERS ROAD
CHARLOTTE 28227 704 568-6500
INDIANA U

NEALE, WIRT THOMAS PD AC 69 70 75
149 PROVIDENCE ROAD
CHARLOTTE 28207 704 377-5571
U OF TENNESSEE

PARKE, JAMES CLIFTON, JR. PD /NPM AC 54 54 63
P. O. BOX 32861
CHARLOTTE MEM. HOSP.
CHARLOTTE 28232 704 355-3156
U OF NC

PLONK, JOHN BUTLER PD /ADL AC 81 00 80
427 N. WENDOVER RD.
CHARLOTTE 28211 704 364-3740
U OF NC

RODDEY, OLIVER FENNELL, JR. PD AC 55 55 70
2711--501 RANDOLPH ROAD
CHARLOTTE 28207 704 374-1736
U OF NC

ROTH, JONATHAN B. PD /NPM AC 84 87 90
PO BOX 33549
PRESBYTERIAN HOSPITAL
CHARLOTTE 28233 704 371-4944
MT SINAI SCH MED

RUPAR, DAVID GERARD PD AC 79 84 89
PO BOX 32861
CHARLOTTE MEM. HOSP.
CHARLOTTE 28232 704 338-3883
GEORGETOWN U

RUTLEDGE, MARY LOUISE PD L/RT 48 49 51
2157 NORTON ROAD
CHARLOTTE 28207 704 334-9218
TEMPLE U

SATTERFIELD, JAMISON JEROME PD AC 86 89 89
2711 RANDOLPH RD., STE. 301
CHARLOTTE 28207 704 332-6332
MED COLL OF GA

SCHWARTZ, ROBERT PAUL PD /PDE AC 68 68 74
CAROLINAS MEDICAL CENTER
P. O. BOX 32861
CHARLOTTE 28232 704 355-3156
U OF FLORIDA

SCOTT, DEBORAH ANNETTE PD AC 78 80 81
5600 ALBEMARLE RD. STE. 800
CHARLOTTE 28227 704 376-0884
U OF NC

SHAFFNER, SUSAN CASPER PD AC 84 87 85
1700 ABBEY PL.
CHARLOTTE 28209 704 332-7539
BOWMAN GRAY

SLOTKIN, ROBERT IRVING PD AC 61 64 73
2317 RANDOLPH ROAD
CHARLOTTE 28207 704 376-5572
U OF VIRGINIA

SMITH, HENRY LOUIS, II PD AC 66 66 72
1700 ABBEY PLACE
CHARLOTTE 28209 704 523-7232
U OF PENN

SMOLEN, PAUL MATHIEU PD AC 78 79 83
427 N. WENDOVER RD.
CHARLOTTE 28211 704 364-3740
RUTGERS MED SCH

SNITZ, ARNOLD IRA PD AC 75 75 79
2620 E. SEVENTH ST.
CHARLOTTE 28204 704 332-7141
U OF VIRGINIA

SPAUGH, EARLE PD /ADL S/RT 50 50 55
411 N. WENDOVER RD.
CHARLOTTE 28211 704 375-9795
U OF PENN

SWETENBURG, RAYMOND LEE, JR. PD AC 76 78 79
2711 RANDOLPH RD. STE. 501
EASTOVER PEDIATRICS
CHARLOTTE 28207 704 374-1736
DUKE

WAGONER, DAVID KIRK PD AC 71 71 78
332 LILLINGTON AVENUE
CHARLOTTE 28204 704 376-4493
U OF NC

WALKER, ANNE ENGLISH PD AC 80 83 84
427 N. WENDOVER RD.
CHARLOTTE 28211 704 332-8139
U OF NC

WALKER, THOMAS ENGLISH PD L/RT 50 50 53
610 CONCORD RD.
DAVIDSON 28036 704 892-4044
HARVARD

WARNER, CHARLES ERNEST PD AC 58 58 63
1700 ABBEY PLACE
CHARLOTTE 28209 704 523-7232
DUKE

WATKINS, CARLTON GUNTER PD L/RT 43 43 46
8713 GAINSFORD CT.
CHARLOTTE 28210 704 372-7790
WASHINGTON U

WHITE, WILLIAM ELLIOTT PD L/RT 46 47 53
2220 RED FOX TRAIL
CHARLOTTE 28221 704 366-8697
BOWMAN GRAY

PEDIATRIC ALLERGY

LEFKOWITZ, DAVID, III PDA /PD AC 65 65 78
2711 RANDOLPH RD. STE. 400
CHARLOTTE 28207 704 372-7900
TULANE U

PEDIATRIC CARDIOLOGY

RIOPEL, DONALD AIME PDC AC 63 66 84
1001 BLYTHE BLVD. #300
CHARLOTTE 28203 704 373-1813
U OF FLORIDA

SMITH, RICHARD THOMAS, JR. PDC AC 78 79 89
1001 BLYTHE BLVD. STE. 300
CHARLOTTE 28203 704 373-1503
U OF FLORIDA

PEDIATRIC ENDOCRINOLOGY

PARKER, MARK WILLIAM PDE /PDE AC 78 81 89
1900 RANDOLPH RD., STE 304
CHARLOTTE 28207 704 372-8750
OHIO STATE U

PEDIATRIC SURGERY

HAMILTON, JAMES PRESSLY PDS AC 58 58 65
2104 RANDOLPH ROAD
CHARLOTTE 28207 704 377-3900
U OF PENN

MORTON, DUNCAN, JR. PDS AC 66 66 76
2104 RANDOLPH ROAD
CHARLOTTE 28207 704 377-3900
U OF NC

PUBLIC HEALTH

CONARD-CORKEY, ELIZABETH M. PH /GPM L 29 48 49
519 HERMITAGE COURT
CHARLOTTE 28207 704 375-7831
U OF MICHIGAN

KAMP, MAURICE ARTHUR PH /GPM L/RT 32 33 63
1400 DREXEL PLACE
CHARLOTTE 28209 704 525-3468
MED COLL OF VA

PLASTIC SURGERY

BEASLEY, MICHAEL EDWARD PS AC 80 82 79
2215 RANDOLPH RD.
CHARLOTTE 28207 704 372-6846
U OF NC

CHAPLIN, CHARLES HAL PS /GS AC 53 53 54
2215 RANDOLPH ROAD
CHARLOTTE 28207 704 372-6846
JEFFERSON

GIBLIN, THOMAS RICHARD PS A 55 63
421 N. WENDOVER RD.
CHARLOTTE 28211 704 365-82
EMORY U

HENNESSY, ROBIN JOAN PS A 80 80
1900 RANDOLPH RD., STE. 502
CHARLOTTE 28207 704 867-58
FAC LIBRELILLE

HUNSTAD, JOSEPH P. PS /HS A 81 81
101 W. T. HARRIS BLVD. #A422
CHARLOTTE 28213 704 549-87
MICHIGAN ST U

JACOBS, WILLIAM EDWARD PS /GS A 69 70
2215 RANDOLPH ROAD
CHARLOTTE 28207 704 372-68
U OF PENN

LAIRD, WILLIAM KENNETH PS A 68 69
421 N. WENDOVER RD.
CHARLOTTE 28211 704 365-82
U OF TORONTO

MATTHEWS, DAVID CARY PS A 74 75
2215 RANDOLPH ROAD
CHARLOTTE 28207 704 372-68
U OF CINCINNATI

MULLIS, WILLIAM FRANK PS /GS A 68 69
2215 RANDOLPH ROAD
CHARLOTTE 28207 704 372-68
U OF PENN

SMITH, KEVIN LINDSAY PS /HS A 79 80
2215 RANDOLPH RD.
CHARLOTTE 28207 704 372-68
EASTERN VA

TUCKER, PETER LOREN PS A 81 81
421 N. WENDOVER RD.
CHARLOTTE 28211 704 365-82
BOWMAN GRAY

VOCI, VINCENT PS /HS 74 75
2027 RANDOLPH RD.
CHARLOTTE 28207 704 333-83
U OF LOUISVILLE

WALKER, ANDREW WILLIAM PS /HS A 60 60
2215 RANDOLPH ROAD
CHARLOTTE 28207 704 372-68
VANDERBILT U

WATTERSON, PAUL ALMA PS A 82 84
2215 RANDOLPH RD.
CHARLOTTE 28207 704 372-68
GEO WASHINGTON U

PATHOLOGY, ANATOMICAL AND CLINICAL

BENJAMIN, SANFORD PHILIP PTH /CLP A 68 68
2001 VAIL AVE.
CHARLOTTE 28207 704 379-59
WAYNE STATE U

BOYLSTON, JAMES ALAN PTH A 69 69
701 COLVILLE RD.
CHARLOTTE 28207 704 371-48
DUKE

CHRISTENSEN, WAYNE NELS PTH 83 87
3536 TALWYN CT.
CHARLOTTE 28269 704 355-22
MC OF WISCONSIN

COHEN, ARTHUR R. PTH A 77 77
200 HAWTHORNE RD.
PRESBYTERIAN HOSPITAL
CHARLOTTE 28204 704 384-48
BAYLOR

FARNHAM, ROBERT, III PTH A 74 75
PO BOX 33549
CHARLOTTE 28233 704 371-48
U OF PENN

GROOVER, CALTON DOUGLAS PTH A 62 62
P. O. BOX 32861
CHARLOTTE 28232 704 338-32
MED COLL OF GA

LARGE, HIRAM LEE, JR. PTH L/R 42 42
8919 PARK RD. DC-4
SOUTHMINSTER
CHARLOTTE 28210 704 551-70
VANDERBILT U

60. MECKLENBURG COUNTY SOCIETY (Continued)

PFORD, EDWARD HOLDMAN, III PTH C
P.O. BOX 32861 77 81 91
CAROLINAS MED. CTR.
CHARLOTTE 28232 704 355-3467
VANDERBILT U

ARROUM, MARIE-CLAIRE PTH AC
PO BOX 32861 68 76 78
CAROLINAS MEDICAL CENTER
CHARLOTTE 28232 704 355-2251
U OF ST JOSEPH

CALISTER, JAMES ALLEN, JR PTH /CLP AC
1901 RANDOLPH RD. 69 69 76
CHARLOTTE 28207 704 375-6792
BOWMAN GRAY

RR, SAMUEL LAWRENCE PTH AC
CHARLOTTE MEMORIAL HOSPITAL 68 68 73
P. O. BOX 32861
CHARLOTTE 28232 704 355-2251
MED U OF SC

ANDERS, FOSTER J., JR. PTH AC
200 HAWTHORNE LN. 70 71 89
CHARLOTTE 28204 704 384-4814
VANDERBILT U

CHWARTZ, JARED NAPHTALI PTH AC
P. O. BOX 33549 73 74 78
CHARLOTTE 28233 704 384-4814
DUKE

HENOY, VITTAL B. PTH AC
7036 WHITEMARSH CT. 76 79 89
CHARLOTTE 28210 704 379-5982
KARNATAK U

QUIRES, JERRY EWING PTH AC
PO BOX 36507 78 82 88
2425 PARK RD.
CHARLOTTE 28236 704 376-1661
WEST VA U

VACHTER, FRANCIS WILFRED PTH AC
PO BOX 33549 60 61 75
CHARLOTTE 28233 704 384-4814
JEFFERSON

ULMONARY DISEASES

GARDELLA, JOHN EUGENE PUD AC
125 BALDWIN AVE. 74 75 79
CHARLOTTE 28204 704 338-6300
NEW YORK U

GARNER, STUART JOSEPH PUD /IM AC
217 TRAVIS AVE. 80 86 89
CHARLOTTE 28204 704 372-3350
EMORY U

KREMERS, SCOTT ALEX PUD /CD AC
1718 E. 4TH ST. #801 74 75 83
CHARLOTTE 28204 704 375-9932
INDIANA U

LANDIS, EDWARD EVERETT, JR. PUD /IM AC
1350 KINGS DRIVE 62 62 70
CHARLOTTE 28207 704 372-8750
U OF LOUISVILLE

SPANGENTHAL, SELWYN PUD AC
1350 S. KINGS DR. 74 74 84
CHARLOTTE 28207 704 372-8750
U OF CAPE TOWN

VERHOEFF, DIRK PUD L/RT
SEASIDE SPARROW 12 33 33 54
HILTON HEAD ISLAND, SC 29928 803 671-2665
U OF UTRECHT

WILLIAMS, CHARLES D. PUD /IM AC
PRESBYTERIAN HOSP. 50 54 57
1600 E. FIFTH ST.
CHARLOTTE 28204 704 384-7575
DUKE

ADIOLOGY

ADKINS, HENRY THOMAS, JR. R AC
2114 MARRYAT COURT 65 65 73
CHARLOTTE 28211 704 371-4056
MED COLL OF GA

ALPERT, ERIC DAVID R AC
CHARLOTTE RADIOLOGY 71 71 80
PO BOX 36937
CHARLOTTE 28236 704 365-0343
DUKE

ANDERSON, RICHARD DAWSON R /NM AC
2520 SEDLEY ROAD 60 63 78
CHARLOTTE 28211 704 379-5860
COLUMBIA U

BARRETT, GEORGE CARLYLE R AC
6913 HUNTFIELD DR. 52 52 56
CHARLOTTE 28270 704 365-2878
BOWMAN GRAY

BELL, MICHAEL JOHN R /NM AC
2001 VAIL AVENUE 63 63 72
CHARLOTTE 28207 704 379-5860
U OF MINN

BLACK, EDWARD BARNWELL R AC
CHARLOTTE RADIOLOGY 70 70 81
PO BOX 36937
CHARLOTTE NC 28236 704 365-0343
DUKE

CLARK, WILLIAM MACKEY R AC
647 LLEWELLYN PLACE 71 72 78
CHARLOTTE 28207 704 384-4056
HARVARD

COPPEDGE, THOMAS OLIVER, JR. R L/RT
4067 ABINGDON RD. 47 47 51
CHARLOTTE 28211 704 366-0504
BOWMAN GRAY

DE FILIPP, GARY J. R C
CHARLOTTE RADIOLOGY 76 78 89
PO BOX 36937
CHARLOTTE 28236 704 365-0343
CORNELL U

EISENBERG, CARL JESSE R AC
2001 VAIL AVE. 75 75 83
CHARLOTTE 28207 704 379-5860
DOWNSTATE ME CTR

FEE, BRUCE EDGAR R AC
1350 S. KINGS DRIVE 72 73 79
CHARLOTTE 28207 704 342-8310
CREIGHTON U

FRYE, JOSEPH CRAIG R AC
CHARLOTTE RADIOLOGY 60 60 69
PO BOX 36937
CHARLOTTE 28236 704 365-0343
U OF NC

HAYES, HUGH HARRISON,JR. R RT
5033 GORHAM DR. 49 50 60
CHARLOTTE 28226
U OF TENNESSEE

LACKEY, ROBERT STEVENSON R L/RT
2118 PINEWOOD CIR. 48 48 52
CHARLOTTE 28211 704 365-0343
JEFFERSON

MCGINNIS, BARRY DOUGLAS R AC
CHARLOTTE RADIOLOGY 79 82 86
PO BOX 36937
CHARLOTTE 28236 704 331-2274
U OF MICHIGAN

NEWMAN, EDWIN R AC
CHARLOTTE RADIOLOGY 61 67 68
PO BOX 36937
CHARLOTTE 28236 704 364-0568
U OF IOWA

REAMES, PATRICK MARTIN R AC
PO BOX 33549 58 66 66
CHARLOTTE 28233 704 384-4056
U TX-SOU.WESTERN

SALMON, ROBERT BRUCE R AC
CHARLOTTE RADIOLOGY 61 67 68
PO BOX 36937
CHARLOTTE 28236 704 355-2274
WASHINGTON U

TOOTHMAN, DONALD E. R AC
5101 ROSEWATER CT. 83 84 86
CHARLOTTE 28226 704 384-4056
U OF NC

TUGGLE, ALLAN DAVIS R L/RT
2335 FOREST DRIVE 26 40 41
CHARLOTTE 28211 704 366-4089
U OF LOUISVILLE

WHELAN, JOSEPH G., JR. R AC
2001 VAIL AVE. 63 63 89
CHARLOTTE 28207 704 379-5866
U OF LOUISVILLE

WISSING, JOEL ALLEN R AC
CHARLOTTE RADIOLOGY 73 74 85
PO BOX 36937
CHARLOTTE 28236 704 333-0224
U OF ALABAMA

ZIMMERMAN, GERALD DAVID R /NM AC
MERCY HOSPITAL 62 62 70
2001 VAIL AVE.
CHARLOTTE 28207 704 379-5860
M C OF WISCONSIN

ZUGER, JAMES HERMAN R AC
CHARLOTTE RADIOLOGY 73 74 77
PO BOX 36937
CHARLOTTE 28236 704 365-0343
BOSTON U

RHEUMATOLOGY

BOX, PATRICK RHU /IM AC
2310 RANDOLPH ROAD 73 74 85
CHARLOTTE 28207 704 376-2707
U OF FLORIDA

LASTER, ANDREW JAY RHU /IM AC
125 BALDWIN AVE. 79 79 86
CHARLOTTE 28204 704 338-6300
JOHNS HOPKINS

SUNDBERG, THOMAS CLARKE RHU AC
1335 ROMANY ROAD 76 79 83
CHARLOTTE 28204 704 375-1719
WUERZBURG U.GERM

WIDENER, HERBERT LLOYD RHU /IM AC
1350 S. KINGS DRIVE 68 77 78
CHARLOTTE 28207 704 372-8750
MED COLL OF VA

THERAPEUTIC RADIOLOGY

CLONINGER, TIMOTHY EARL TR AC
SOUTHEAST RADIATION ONC. GP 66 66 76
421-D S. SHARON-AMITY RD.
CHARLOTTE 28211 704 338-2272
U OF NC

FRASER, ROBERT WELLINGTON, III TR AC
421-0 SHARON-AMITY RD. 75 77 79
CHARLOTTE 28211 704 355-2272
U OF PENN

KIRSCH, MARK TR AC
3041 VALENCIA TERRACE 69 76 84
CHARLOTTE 28211 704 384-4189
U-WITWATERSRAND

LIANG, MARK JOSEPH TR AC
421-D S. SHARON-AMITY RD. 82 83 90
CHARLOTTE 28211 704 362-1315
MED COLL OF GA

PLUNKETT, STEVEN ROCKWELL TR AC
PO BOX 33549 78 78 84
CHARLOTTE 28233 704 371-4189
MED COLL OF GA

SPRINGER, DONNA JEAN TR C
4421-301 HEDLEY WAY 86 00 90
CHARLOTTE 28210 704 552-5171
U OF FLORIDA

THORACIC SURGERY

COOK, JOSEPH WILLIAM TS /CDS AC
1001 BLYTHE BLVD. #300 68 68 75
CHARLOTTE 28203 704 373-1500
DUKE

EVANGELIST, FELIX ANTHONY TS /CDS AC
3601 E.INDEPENDENCE BLVD.,#204 58 58 71
CHARLOTTE 28205 704 563-7788
GEORGETOWN U

LYDAY, WILLIAM DAVIE TS /GS AC
225 HAWTHORNE LN., STE. 301 53 54 61
CHARLOTTE 28204 704 377-5978
DUKE

60. MECKLENBURG COUNTY SOCIETY (Continued)

ROBICSEK, FRANCIS TS /CDS AC
1001 BLYTHE BLVD. #300 50 58 59
CHARLOTTE 28203 704 373-1500
U OF BUDAPEST

SELLE, JAY GREGORY TS /CDS AC
1001 BLYTHE BLVD. #300 68 69 76
CHARLOTTE 28203 704 373-1500
WAYNE STATE U

TAYLOR, FREDERICK HARVEY TS /CDS AC
1900 RANDOLPH RD.,#216 45 45 54
CHARLOTTE 28207 704 372-1306
DUKE

ZOLLINGER, RICHARD WILLIAM, II TS /CDS AC
1900 RANDOLPH RD. #216 78 79 86
CHARLOTTE 28207 704 375-8413
CHICAGO MED SCH

UROLOGICAL SURGERY

ASRAEL, GERSON U AC
1350 KINGS DRIVE 59 66 70
CHARLOTTE 28207 704 342-8000
U OF MARYLAND

BAIRD, HARRY HAYNES U L
1012 KINGS DRIVE 42 42 44
CHARLOTTE 28283 704 334-6449
WASHINGTON U

BOGGS, LAWRENCE KENNEDY U AC
1012 KINGS DRIVE 49 54 56
CHARLOTTE 28283 704 333-3825
JEFFERSON

DASHER, GEORGE ALBERT U AC
1333 ROMANY ROAD 73 74 80
CHARLOTTE 28204 704 372-5180
MED COLL OF GA

DUPUY, SAMUEL STUART U AC
301 HAWTHORNE LANE 69 72 76
CHARLOTTE 28204 704 374-0236
U OF FLORIDA

ENSOR, ROBERT DALE U AC
1333 ROMANY ROAD 61 61 71
CHARLOTTE 28204 704 372-5180
OHIO STATE U

FEEZOR, CHARLES NOEL, JR. U AC
3535 RANDOLPH ROAD, STE. 101 62 62 70
CHARLOTTE 28211 704 366-4631
BOWMAN GRAY

FINKLEA, ORION TOWNSEND U AC
1333 ROMANY ROAD 55 63 63
CHARLOTTE 28204 704 372-5180
MED U OF SC

GAZAK, JOHN MICHAEL U AC
1718 E. 4TH ST., STE. 807 74 74 82
PRESBYTERIAN MEDICAL TOWER
CHARLOTTE 28204 704 334-3033
U OF PENN

HAWES, SAMUEL PINCKNEY, III U AC
1333 ROMANY ROAD 67 67 75
CHARLOTTE 28204 704 372-5180
VANDERBILT U

HUGHES, WM. HENRY U /EM AC
304 LILLINGTON AVE. 75 79 88
CHARLOTTE 28204 704 331-0846
MEHARRY MED COLL

HUTCHINS, KENNETH RAYMOND U AC
1350 S. KINGS DRIVE 63 63 72
CHARLOTTE 28207 704 372-8750
U OF MICHIGAN

JOHNSTON, HARVEY WYLIE U AC
101 W. T. HARRIS BLVD. 52 56 56
CHARLOTTE 28262 704 547-1392
GEO WASHINGTON U

JUSTIS, HOMER RODEHEAVER U AC
1012 KINGS DRIVE 46 51 53
CHARLOTTE 28283 704 334-6449
U OF VIRGINIA

NOWLIN, GEORGE PRESTON U L/RT
1868 MARYLAND AVENUE 24 29 30
CHARLOTTE 28209 704 334-0302
U OF VIRGINIA

O'NEILL, MICHAEL RAYMOND U AC
1718 E. 4TH ST., STE. 807 76 78 82
PRESBYTERIAN MEDICAL TOWER
CHARLOTTE 28204 704 334-3033
BOWMAN GRAY

RICE, WILLIAM CHARLES U AC
1012 S. KINGS DR., STE. 806 69 69 74
CHARLOTTE 28283 704 334-6449
U OF FLORIDA

SCHOLL, GEORGE KENNETH, JR. U AC
1012 KINGS DR., STE. 806 67 67 74
CHARLOTTE 28283 704 334-6449
U OF TENNESSEE

SOMERSTEIN, DAVID EUGENE U AC
3535 RANDOLPH RD. #W106 66 66 73
CHARLOTTE 28211 704 365-0371
MED U OF SC

STORY, WILLIAM ROBERT U AC
1012 KINGS DRIVE 58 58 68
CHARLOTTE 28283 704 334-6449
U OF NC

TEIGLAND, CHRIS M. U AC
1718 E. FOURTH ST. #608 80 81 87
PRESBYTERIAN MEDICAL TOWER
CHARLOTTE 28204 704 358-0880
DUKE

61. MITCHELL-YANCEY COMPONENT SOCIETY

OFFICERS—**President:** Thomas Kaluzynski, M.D., 408 Altapass Rd., Spruce Pine 28777 (704 765-7408)
Secretary: Susan Snider, M.D., 112 Hospital Dr., Spruce Pine 28777 (704 765-6101)

FAMILY PRACTICE

JOHNSON, JAMES NOLEN FP /EM AC
213 DEER PARK LAKE DR. 57 58 59
SPRUCE PINE 28777 704 765-1414
U OF TENNESSEE

MCKAY, JAMES HAMILTON WOODROW FP AC
200 SEVEN MILE RIDGE RD. 84 86 90
BURNSVILLE 28714 704 675-4116
EMORY U

GENERAL PRACTICE

SARGENT, WINSTON ARTHUR Y. GP L/RT
37 SUMMIT ST. 30 31 54
BURNSVILLE 28714
U OF VERMONT

GENERAL SURGERY

HORNER, JACK CHENOWTH GS L/RT
37 PACES WEST PLACE 37 51 51
ATLANTA, GA 30327 404 237-4651
GEO WASHINGTON U

REES, TERRY TAYLOR GS /TS AC
108 HOSPITAL DR. 55 55 89
SPRUCE PINE 28777 704 765-2665
TULANE U

PEDIATRICS

CORT, CAROLYN RAY PD AC
P. O. BOX 188 70 70 79
BURNSVILLE 28714 704 682-6912
BOWMAN GRAY

62. MONTGOMERY COMPONENT SOCIETY

OFFICERS—**President:** William Hanham, M.D., 453 Wood St., Troy 27371 (919 572-3621)
Secretary: Richard Clark, M.D., 506 Wood St., Troy 27371 (919 572-3737)

FAMILY PRACTICE

MCROBERTS, DEBORAH S. W. FP AC
104 PROFESSIONAL DR. 85 86 88
PO BOX 429
BISCOE 27209 919 428-9607
U OF MISSISSIPPI

GENERAL SURGERY

CLARK, RICHARD STROEBE GS AC
506 WOOD ST. 59 60 89
TROY 27371 919 572-3737
U OF SOU CALIF

HIGHSMITH, CHARLES GS /ORS L/RT
P. O. BOX D 42 42 52
TROY 27371 919 576-5511
GEO WASHINGTON U

RADIOLOGY

GLENN, JOHN CAPERS, JR. R /NM L
514 WOOD STREET 43 47 47
TROY 27371 919 572-3475
DUKE

63. MOORE COMPONENT SOCIETY

OFFICERS—**President:** Steven Carter, M.D., PO Box 2060, Southern Pines 28387 (919 295-7187)
Secretary: Jack Young, M.D., PO Box 1749, Pinehurst 28374 (919 295-2888)

O SPECIALTY LISTED

WILDER, RABOTEAU L/RT 41 41 78
PO BOX 2001
SOUTHERN PINES 28387 919 692-0291
TEMPLE U

LLERGY & IMMUNOLOGY

WEIDAW, HAROLD RICHARD AI /IM AC 54 55 83
165 PAGE RD. 919 295-6661
PINEHURST 28374
JEFFERSON

NESTHESIOLOGY

CARTER, STEVEN RAYMOND AN AC 78 80 82
PO BOX 2060 919 295-6720
SOUTHERN PINES 28388
BOWMAN GRAY

HARTSELL, CHARLES JACOB, JR. AN AC 58 58 63
MOORE MEMORIAL HOSPITAL 919 295-6861
PINEHURST 28374
DUKE

HOSTETLER, HERBERT JAMES AN AC 59 60 84
PO BOX 730 919 295-4606
WEST END 27376
U OF ILLINOIS

MCFADDEN, JAMES STUART AN AC 71 71 78
35 MCDONALD RD. WEST 919 295-7184
PINEHURST 28374
U OF NC

NAKAMOTO, RONA KEIKO AN AC 83 83 87
722 HIGHLAND DR. 919 295-4661
SANFORD 27330
TEXAS TECH U

PUBLIC HEALTH

COWHERD, DAVID MCLELLAN CD AC 81 81 77
PO BOX 3000
MOORE REGIONAL HOSP.
PINEHURST 28374 919 295-7882
U OF NC

PARRISH, JOSEPH LESTER CD /CCM AC 80 82 90
205 PAGE ROAD 919 295-7882
PINEHURST 28374
U OF TENNESSEE

PATTERSON, F. M. SIMMONS, JR. CD /IM AC 71 71 78
PINEHURST MEDICAL CLI.
205 PAGE ROAD
PINEHURST 28374 919 295-5511
U OF PENN

CARDIOVASCULAR SURGERY

KRAHNERT, JOHN FREDERICK, JR. CDS/TS AC 83 83 90
ONE MEMORIAL DR. 919 295-0217
PINEHURST 28374
BOWMAN GRAY

DERMATOLOGY

PESTANA, ANAMARI D AC 83 85 89
5010 COCO PLUM WA 919 295-5567
SARASOTA, FL 34241
U OF MIAMI

ROSTAN, STEPHEN EDWIN D /DMP AC 70 71 77
P. O. BOX 669 919 295-5567
PINEHURST 28374
VANDERBILT U

SUBIN, DIANE CUSUMANO D AC 82 83 89
P.O. BOX 4078 919 295-5567
PINEHURST 28374
MT SINAI SCH MED

DIAGNOSTIC RADIOLOGY

KRUSE, RICHARD STEVEN DR /NM AC 71 72 79
PO BOX 1795 919 295-1569
SOUTHERN PINES 28387
GEORGETOWN U

LINA, JOHN RAYMOND DR /R AC 73 74 81
203 RIDGEVIEW ROAD 919 295-7040
SOUTHERN PINES 28387
MED SCH-UMDNJ

STRASSER, STEPHAN F. DR AC 82 84 88
225 TALL TIMBERS DR. 919 295-4400
PINEHURST 28374
CHICAGO MED SCH

EMERGENCY MEDICINE

CLEARY, JIM RAY EM /IM AC 60 60 63
900 MONTICELLO DR. 919 692-3644
PINEHURST 28374
BOWMAN GRAY

JACQUES, ROBERT SAMUEL EM /FP AC 53 54 55
P. O. BOX 695 919 295-7777
PITTSBORO 27312
LOMA LINDA U

SIMPKINS, DARRELL G. EM /GPM AC 82 83 89
110 EDINBORO DR. 919 295-7777
SOUTHERN PINES 28387
MED U OF SC

FAMILY PRACTICE

LAM, DOUGLAS EDWARD FP AC 76 77 84
105 PERRY DRIVE 919 692-4802
SOUTHERN PINES 28387
WAYNE STATE U

MELLEY, OFELIA NICKEL FP AC 84 86 90
PO BOX 625 919 295-1240
PINEHURST 28374
AUTONOMA UNIV

PATRICK, WILLIAM WARD FP /PH AC 74 76 80
PO BOX 3290 919 295-1781
PINEHURST 28374
GEORGETOWN U

STREET, MURDO EUGENE, JR. FP L/RT 37 37 42
P. O. BOX 38 919 464-5315
GLENDON 27251
DUKE

GENERAL PRACTICE

CADDELL, TILLIE HORKEY GP L 51 52 62
P. O. BOX 519 919 295-5511
PINEHURST 28374
MED COLL OF GA

FELTON, ROBERT LEE, JR. GP L 27 27 30
PO BOX 57 703 882-3743
WATERFORD, VA 22190
U OF PENN

LEE, KYU YONG GP AC 68 77 86
MCCAIN HOSPITAL 919 944-2351
MCCAIN 28361
CATHOLIC U

MCLEOD, VIDA CANADAY GP L/RT 19 31 31
WEYMOUTH APTS., BOX 2001 919 692-0333
SOUTHERN PINES 28387
BAYLOR

OWENS, FRANCIS LEROY GP /ABS L/RT 34 35 38
PO BOX 3101
PINEHURST 28374
DUKE

GENERAL SURGERY

CHIULLI, RICHARD ALLEN GS AC 77 81 82
PO BOX 2000 919 295-0260
1 MEMORIAL DR.
PINEHURST 28374
BOSTON U

ELLIOTT, HARDIE BISHOP GS /EM AC 37 37 74
47 VILLAGE GREEN 919 692-7451
SOUTHERN PINES 28387
U OF TEXAS

LARSEN, ERIC GS /CDS AC 65 65 72
P. O. BOX 2000 919 295-0262
PINEHURST 28374
CASE WESTERN RES

MONROE, CLEMENT ROSENBURG GS L/RT 24 25 30
1475 MIDLAND RD. 919 692-4888
#18 MIDDLETON PL.
SOUTHERN PINES 28387
U OF MARYLAND

PHILLIPS, CHARLES A. SPEAS GS /CRS L/RT 47 49 54
PO BOX 430 919 692-8496
PINEHURST 28374
NORTHWESTERN U

ROWLAND, MICHAEL CLARK GS /GE AC 75 76 80
P. O. BOX 2000 919 295-0264
PINEHURST 28374
ST U OF NY-BUFF

SHUPECK, MALCOLM GS AC 81 82 91
ONE MEMORIAL DRIVE 919 295-0237
PINEHURST 28374
MED COLL OF VA

HEAD AND NECK SURGERY

HENDERSON, GEORGE P.,JR. HNS /OTO AC 64 64 72
PINEHURST SURGICAL CLINIC 919 295-0242
PINEHURST 28374
U OF NC

INTERNAL MEDICINE

COLLINS, FRANCIS FARRELL, JR. IM /PUD AC 72 73 77
205 PAGE RD. 919 295-5511
PINEHURST 28374
U OF VERMONT

DALEY, MICHAEL BERNARD IM AC 78 79 82
PINEHURST MEDICAL CLI.
205 PAGE RD.
PINEHURST 28374 919 295-5511
MED U OF SC

DAUGHTRIDGE, CLAY C., JR. IM /CD AC 59 59 67
PINEHURST MEDICAL CLI.
205 PAGE ROAD
PINEHURST 28374 919 295-5511
BOWMAN GRAY

GIBSON, JACKSON V. IM AC 80 80 84
205 PAGE RD. 919 295-5511
PINEHURST 28374
U OF NC

HOLBROOK, JOSEPH SAM IM /CD L 32 32 34
PO BOX 2004 704 872-1000
SOUTHERN PINES 28388
U OF PENN

LINEBERGER, THOMAS H. IM AC 80 81 84
1902-C N. SANDHILLS BLVD. 919 692-4011
ABERDEEN 28315
U OF NC

MARTIN, DAVID FARRA IM /GE AC 80 83 90
205 PAGE RD. 919 295-5511
PINEHURST 28374
BOWMAN GRAY

MCMILLAN, ROBERT MONROE IM L/RT 38 38 46
CCNS, ROYAL DORNOCH LANE 11 919 692-6885
PINEHURST 28374
JOHNS HOPKINS

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2170 MIDLAND ROAD
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MONROE, JOHN LAUCHLIN OTO /HNS AC
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PO BOX 56
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HARVARD

FLEURY, ROBERT ANDRE P /ALD AC
77 78 8
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SUTHER, THOMAS CORNELIUS, JR. P /GP AC
56 56 7
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PEDIATRICS

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195 W. ILLINOIS AVE.
SOUTHERN PINES 28387 919 692-2444
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STEWART, WILLIAM LEE PD AC
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63. MOORE COMPONENT SOCIETY (Continued)

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U OF PENN

PAYNE, FRED WILLIAM, JR. GS AC
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VANDERBILT U

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U OF TENNESSEE

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HOLLAND, MICHAEL DAY IM /NEP AC
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ROCKY MOUNT 27801 919 443-9084
U OF NC

RABIL, DONALD MICHAEL IM /PUD AC
100 NASH MEDICAL ARTS MALL 83 84 80
ROCKY MOUNT 27801 919 443-9084
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100 S. TAYLOR ST. 46 49 49
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NEUROLOGY

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2412 PROFESSIONAL DR.
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U OF TEXAS

GUARINO, ROSARIO N C
2412 PROFESSIONAL DR. 81 83 90
BOX 7504
ROCKY MOUNT 27801 919 443-0041
RUTGERS MED SCH

NEPHROLOGY

BYNUM, ROBERT WILLIAM, IV NEP /IM AC
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MACEDO, NELSON T. NS AC
2416 PROFESSIONAL DR. 73 81 88
PO BOX 7546
ROCKY MOUNT 27804 919 443-4563
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PO BOX 7546 68 68 82
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ADKINS, NEAL ASHLEY OBG AC
132 FOY DRIVE 72 72 78
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200 NASH MEDICAL ARTS MALL 83 84 81
ROCKY MOUNT 27804 919 443-5941
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ROCKY MOUNT 27801 919 442-4756
U OF MARYLAND

HIGH, LARRY ALLISON, JR. OBG AC
132 FOY DRIVE 72 72 78
ROCKY MOUNT 27801 919 443-6622
U OF NC

KRONCKE, FREDERICK GEORGE, JR. OBG AC
200 NASH MEDICAL ARTS MALL 70 70 75
ROCKY MOUNT 27801 919 443-5941
U OF NC

OVERTON, DOLPHIN HENRY,JR. OBG AC
132 FOY DRIVE 53 61 61
ROCKY MOUNT 27801 919 443-6622
DUKE

REWIS, JAMES CLAY OBG C
132 FOY DR. 85 86 90
ROCKY MOUNT 27804 919 443-6622
MED COLL OF GA

THORP, JAMES HORACE MERRIAM OBG AC
200 NASH MEDICAL ARTS MALL 57 57 66
ROCKY MOUNT 27804 919 443-5941
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WILSON, MOSES ELLUED OBG AC
PO BOX 8033 76 76 85
140 N. ENGLEWOOD DR.
ROCKY MOUNT 27804 919 937-6611
U OF NC

ONCOLOGY

CROCKER, DANIEL LIND ON /HEM AC
100 NASH MEDICAL ARTS MALL 70 70 76
ROCKY MOUNT 27801 919 443-9084
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OPHTHALMOLOGY

BAILEY, LLOYD W. OPH AC
109 FOY DRIVE 53 53 57
ROCKY MOUNT 27804 919 443-5164
JEFFERSON

CARROLL, WILLIAM WARREN OPH AC
116 N. CIRCLE DRIVE 53 53 74
ROCKY MOUNT 27801 919 443-4145
CASE WESTERN RES

WATSON, SUSAN A. OPH AC
WATSON EYE, PA 81 82 87
108 NASH MEDICAL ARTS MALL
ROCKY MOUNT 27804 919 536-3130
U OF CINCINNATI

ORTHOPEDIC SURGERY

MARSIGLI, ADOLFO HECTOR ORS /HS AC
110 NASH MEDICAL ARTS MALL 68 72 74
ROCKY MOUNT 27801 919 443-8830
BUENOS AIRES U

MARSIGLI, EDUARDO OSCAR ORS AC
110 NASH MEDICAL ARTS MALL 68 67 76
ROCKY MOUNT 27801 919 443-8830
BUENOS AIRES U

OTOLARYNGOLOGY

BAGGETT, HENRY CLIFFORD OTO AC
2420 PROFESSIONAL DR. 70 70 77
P. O. BOX 7099
ROCKY MOUNT 27804 919 937-4100
U OF NC

CRAWFORD, MICHAEL D. OTO AC
PO BOX 7099 81 83 88
ROCKY MOUNT 27804 919 937-4100
WEST VA U

JARVIS, BENNIE LEA OTO AC
2420 PROFESSIUONAL DR. 85 87 90
PO BOX 7099
ROCKY MOUNT 27804 919 937-4100
U OF NC

PSYCHIATRY

BENTSEN, BIRGER STEVEN P AC
1701 SUNSET DR., STE. 200 83 84 86
ROCKY MOUNT 27804 919 972-4302
U OF CINCINNATI

LEE, SOONG HYUN P AC
106 NASH MEDICAL ARTS MALL 63 72 76
ROCKY MOUNT 27804 919 443-8002
SEOUL NATL U

PEDIATRICS

COOPER, WILLIAM CORNELIUS, JR. PD AC
124 FOY DRIVE 60 60 67
ROCKY MOUNT 27801 919 443-4031
DUKE

CRUMPLER, JAMES FULTON PD L
1409 W. HAVEN BLVD. 30 30 35
ROCKY MOUNT 27803 919 442-1523
NEW YORK U

64. NASH COMPONENT SOCIETY (Continued)

KINNAIRD, PAUL MCKEE, JR. PD AC
101 NASH MEDICAL ARTS MALL 76 77 86
ROCKY MOUNT 27804 919 937-7979
U OF LOUISVILLE

RAMSEY, EDWARD ALLISON PD AC
124 FOYE DRIVE 75 75 78
ROCKY MOUNT 27804 919 443-4031
BOWMAN GRAY

SHERIDAN, ROBERT JOHN PD AC
101 NASH MEDICAL ARTS MALL 48 53 53
ROCKY MOUNT 27804 919 937-7979
DUKE

PUBLIC HEALTH

CHAMBLEE, JOHN SIGMA PH /GPM L/RT
509 E. CHURCH STREET 38 38 42
NASHVILLE 27856 919 459-2223
EMORY U

PATHOLOGY, ANATOMICAL AND CLINICAL

BASS, SPENCER PIPPEN, JR. PTH L/RT
P. O. BOX 605 49 53 57
TARBORO 27886 919 823-3114
U OF VIRGINIA

ZIPF, ROBERT EUGENE, JR. PTH /FOP AC
NASH GENERAL HOSPITAL 66 66 79
ROCKY MOUNT 27801 919 443-8043
OHIO STATE U

PULMONARY DISEASES

KUMAR, KAMLESH PUD /IM AC
108 N. ENGLEWOOD DR. 63 72 80
ROCKY MOUNT 27801 919 443-1126
GSV MED COLLEGE

KUMAR, SATISH KUMAR PUD /IM AC
108 N. ENGLEWOOD DR. 62 72 80
ROCKY MOUNT 27801 919 443-1126
INST OF MED SCI

PROCTOR, CAMILLA ALLYN PUD AC
3009 ZEBULON ROAD 68 68 74
ROCKY MOUNT 27801 919 443-2552
U OF NC

RADIOLOGY

BROCK, JULIAN STANLEY R L/RT
200 ENGLEWOOD DRIVE 51 52 53
ROCKY MOUNT 27804 919 443-1353
DUKE

ENGSTROM, LINCOLN L. R /NR AC
217 KIMBERLY JO DR. 61 61 88
ROCKY MOUNT 27804 919 443-8083
BOWMAN GRAY

FRITZ, RICHARD THOMAS R AC
PO BOX 88 76 77 85
RED OAK 27868 919 443-8083
U OF NC

RHEUMATOLOGY

PATRONE, NICHOLAS ANGELO RHU /IM AC
ECU DEPT. OF MED.& PED. 76 76 77
GREENVILLE 27858 919 551-2533
LOYOLA U

UROLOGICAL SURGERY

FROHBOSE, WILLIAM JOSEPH U L/RT
212 PIEDMONT AVENUE 43 53 53
ROCKY MOUNT 27801 919 443-3136
MED COLL OF VA

MACAULAY, ROBERT JOSEPH, JR. U AC
180 FOY DR. 56 60 63
ROCKY MOUNT 27804 919 443-3136
GEO WASHINGTON U

MATHES, GORDON LAWRENCE, JR. U AC
180 FOY DR. 76 77 84
ROCKY MOUNT 27804 919 443-3136
U OF TENNESSEE

WHISNANT, JOSEPH DURWOOD, JR. U AC
3136 SUNSET AVE. 71 71 81
ROCKY MOUNT 27801 919 443-3136
BOWMAN GRAY

WHITAKER, JAMES ALLEN U L
624 FALLS ROAD 33 34 35
ROCKY MOUNT 27804 919 442-3516
TEMPLE U

65. NEW HANOVER-PENDER COMPONENT SOCIETY

OFFICERS—**President:** James D. Kesler, M.D., 1120 Medical Center Dr., Wilmington 28401 (919 763-7316)
Secretary: Mark Foster, M.D., 2001 S. 17th St., Wilmington 28401 (919 763-7344)
Executive Director: Bonnie J. Brown, PO Box 10400, 103 Green Meadows Dr., Wilmington 28405 (919 791-6952)

NO SPECIALTY LISTED

STRATAS, BYRON ARISTOTLE AC
1915 GLEN MEADE RD. 86 86 83
WILMINGTON 28403 919 763-3601
EAST CAROLINA U

ALLERGY

MACQUEEN, DONALD MILES A /PD AC
2321 DELANEY AVENUE 69 69 73
WILMINGTON 28403 919 763-1661
U OF NC

ALCOHOL & DRUG ABUSE

KEITH, JULIAN FAISON, JR. ALD /FP AC
5733 OAK BLUFF LN. 53 53 57
WILMINGTON 28403 919 251-6540
BOWMAN GRAY

ANESTHESIOLOGY

BEAN, VIRGIL EDWARD AN AC
3225 SHADOW CT. 83 84 87
WILMINGTON 28403 919 343-7000
BOWMAN GRAY

FISHMAN, JOHN JAY AN AC
1227 MEDICAL CTR. DR. 67 67 88
WILMINGTON 28401 919 395-1150
TULANE U

HALL, GREGORY GRAYSON AN AC
2144 ECHO LANE 83 85 86
WILMINGTON 28403
DUKE

HOWARD, KIRK A. AN C
3115 KIRBY SMITH DR. 85 85 90
WILMINGTON 28409 919 343-7697
U OF PENN

JOHNSON, BETTY HULL AN AC
1907 HAWTHORNE RD. 74 75 88
WILMINGTON 28403 919 343-2486
WEST VA U

PACE, JOHN SANDERSON AN AC
825 INLET VIEW DRIVE 71 73 77
WILMINGTON 28409 919 350-0248
U OF MIAMI

SHAH, JYOTSNA RAMESH AN AC
116 ROBERT E. LEE DRIVE 64 64 81
WILMINGTON 28403 919 763-4901
U OF BOMBAY

SHAPIRO, DANIEL ALLEN AN AC
5627 WOOD DUCK CIR. 78 79 85
WILMINGTON 28409 919 343-7000
U OF NC

SMITH, STEPHEN BRIAN AN AC
125 BRETONSHIRE RD. 84 85 00
WILMINGTON 28405 919 343-7697
U OF OKLAHOMA

WHITTEN, CHRISTOPHER JOHN AN AC
117 PARMEL BLVD. 84 85 89
WRIGHTSVILLE BEACH 28480 919 452-0816
MARSHALL U

CARDIOVASCULAR DISEASES

BARNARD, DIANNE C. CD AC
1515 DOCTORS CIR. 82 82 88
WILMINGTON 28401 919 763-5182
U OF MASS

CONLEY, MARTIN JAMES, JR. CD /IM AC
1515 DOCTOR'S CIRCLE 73 73 83
WILMINGTON 28401 919 763-5182
DUKE

EVERHART, ROBERT G. CD AC
1202 MEDICAL CENTER DR. 81 81 88
WILMINGTON 28401 919 341-3300
HAHNEMANN

HELAK, JOSEPH WALTER CD /IM AC
6408 WESTPORT DR. 75 77 84
WILMINGTON 28409 919 341-3400
SUNY-SYRACUSE

HOLT, WILLIAM REUBEN, JR. CD /IM AC
1515 DOCTOR'S CIRCLE 77 80 83
WILMINGTON 28401 919 763-5182
MED COLL OF VA

ROBINSON, NORMAN JEFFREY CD /IM AC
2131 S. 17TH ST. 63 63 71
PO BOX 9000
WILMINGTON 28402 919 343-0161
DUKE

SNYDER, JAMES WILLIAM CD /IM AC
1515 DOCTOR'S CIRCLE 69 69 74
WILMINGTON 28401 919 763-5182
U OF NC

TAMISIEA, J. RICHARD CD/IM AC
1202 MEDICAL CENTER DR. 64 64 73
WILMINGTON 28401 919 341-3301
CREIGHTON U

CARDIOVASCULAR SURGERY

DAVID, IVAN CDS AC
1912 TRADD COURT 74 79 89
WILMINGTON 28401 919 762-7070
U OF PADOVA

HUNT, OLIVER RAYMOND, JR. CDS /TS AC
1607 DOCTOR'S CIRCLE 51 51 72
WILMINGTON 28401 919 763-6571
U OF LOUISVILLE

HUNTER, CHARLES E., JR. CDS /TS AC
1912 TRADD CT. 75 76 87
WILMINGTON 28401 919 762-7070
U OF ALABAMA

DERMATOLOGY

COURREGE, MARY LOU D AC
3208 OLEANDER DR. 82 82 88
WILMINGTON 28403 919 763-7333
LA STATE U

65. NEW HANOVER-PENDER COMPONENT SOCIETY (Continued)

DONAHUE, MICHAEL JOSEPH D AC 67 67 73
1505 MEDICAL CENTER DRIVE
WILMINGTON 28401 919 763-1555
CREIGHTON U

VAN-VELSOR, HARRY D AC 47 54 54
1924 S. SIXTEENTH STREET
WILMINGTON 28401 919 762-5207
ALBANY MED COLL

DIAGNOSTIC RADIOLOGY

REMINGTON, JOHN LAUREN DR AC 79 81 85
2101 S. LIVE OAK PARKWAY
WILMINGTON 28403 919 762-3882
U OF SOU FLORIDA

ROSENBERG, ERIC RONALD DR AC 75 75 84
1924 S. LIVE OAK PARKWAY
WILMINGTON 28403 919 762-3882
NEW YORK MED COL

SINCLAIR, ROBEY THOMAS, JR. DR L/RT 38 38 40
5301 WRIGHTSVILLE AVENUE
WILMINGTON 28401 919 395-8100
GEORGETOWN U

EMERGENCY MEDICINE

JAFFURS, WILLIAM J., JR. EM AC 79 79 86
5301 WRIGHTSVILLE AVE.
WILMINGTON 28403
GEO WASHINGTON U

KORNBLATT, BRIAN JAY EM AC 79 80 87
233 SEAGULL LN.
WILMINGTON 28403 919 256-5814
MED COLL OF PENN

MARBURG, KENNETH CHARLES EM /FP AC 70 73 85
PO BOX 3886
WILMINGTON 28406 919 791-0075
U OF MARYLAND

PARR, ROBERT ALEXANDER EM AC 78 84 84
NEW HANOVER HOSPITAL
DEPT. OF EMERGENCY MED.
WILMINGTON 28401 919 343-7000
DES MOINES OST

SPICER, SAMUEL SHERMAN EM /FP AC 39 77 82
5801 OAK BLUFF LN.
WILMINGTON 28409
UNIV. OF S.C.

WARD, MICHAEL MUNDY EM AC 77 79 82
2612 SHANDY LANE
WILMINGTON 28409 919 350-0347
U OF NC

FAMILY PRACTICE

ALMOND, CHARLES MALCOLM FP AC 70 70 75
1960 S. 16TH ST.
WILMINGTON 28401 919 343-9991
U OF NC

ARMISTEAD, HOWARD LACY,JR. FP /OM AC 66 67 68
2108 S. SEVENTEENTH STREET
WILMINGTON 28401 919 762-7776
U OF VIRGINIA

COLLINS, STEPHEN F. FP /OM AC 62 00 89
RIEGELWOOD MEDICAL CTR.
BOX 98
RIEGELWOOD 28456
U OF LOUISVILLE

DEES, JOHN TYLER FP /PH AC 52 52 54
ST. HELENA RD.
PO BOX 815
BURGAW 28425 919 259-5171
DUKE

MUSSELWHITE, NEILL HECTOR,III FP AC 75 75 75
1960 S. 16TH ST.
WILMINGTON 28401 919 251-9977
BOWMAN GRAY

PENCE, JAMES JEROME, JR. FP AC 59 59 62
2110 SOUTH 17TH ST.
WILMINGTON 28401 919 763-3481
DUKE

SUVILLAGA, VICTOR IVAN FP /EM AC 77 82 83
5097 EDINBORO LN.
WILMINGTON 28403 919 395-6273
U EL SALVADOR

THOMAS, MICHAEL BEMAN FP AC 79 81 86
1908 MEETING COURT
WILMINGTON 28401 919 762-1515
U OF MICHIGAN

THOMPSON, GEORGE R. C. FP L/RT 39 42 43
730 ROBERT E. LEE DR.
WILMINGTON 28412 919 452-1270
MED U OF SC

VISSER, SCOTT WILLIAM FP AC 86 87 89
5303-E WRIGHTSVILLE AVE.
WILMINGTON 28403 919 748-4479
U OF VIRGINIA

WOODWORTH, ALFRED HERMAN FP /EM AC 68 71 78
224 SEAGULL LANE
WILMINGTON 28403 919 392-3216
ALBANY MED COLL

GASTROENTEROLOGY

KITTINGER, JOSEPH WILLIAM, III GE /IM AC 80 80 85
1202 MEDICAL CENTER DR.
WILMINGTON 28401 919 341-3345
U OF ARKANSAS

MASTRANGELO, MICHAEL ROCCO GE AC 78 79 85
1515 DOCTOR'S CIRCLE
WILMINGTON 28401 919 763-5182
U OF KENTUCKY

MERTESDORF, JAMES MICHAEL GE AC 78 78 85
1515 DOCTORS CIRCLE
WILMINGTON 28401 919 763-1219
LOYOLA U

MEYER, CLINTON LOUIS GE /IM AC 78 78 84
1202 MEDICAL CENTER DR.
WILMINGTON 28401 919 341-3345
U NEWFOUNDLAND

RUST, CARL KING, II GE /IM AC 68 68 77
1202 MEDICAL CENTER DR.
WILMINGTON 28401 919 341-3300
BOWMAN GRAY

SHUFORD, WILLIAM FERRELL, JR. GE AC 61 61 67
1515 DOCTOR'S CIRCLE
WILMINGTON 28401 919 763-5182
U OF NC

WILKINS, LUCIEN SANDERS GE AC 67 67 73
1202 MEDICAL CENTER DRIVE
WILMINGTON 28401 919 341-3346
MED COLL OF VA

GENERAL PRACTICE

BURDETTE, FRED MCPHERSON, JR. GP L/RT 42 47 48
1232-A COLUMBUS CIR.
WILMINGTON 28403 919 762-9463
MED U OF SC

WILSON, JACK KENNEDY, SR. GP L/RT 37 37 66
1908 HAWTHORNE ROAD
WILMINGTON 28403 919 763-5536
U OF TENNESSEE

GENERAL PREVENTIVE MEDICINE

JEWELL, KATHLEEN T. GPM AC 79 81 89
601 S. COLLEGE RD.
WILMINGTON 28403 919 395-3280
JEFFERSON

GENERAL SURGERY

ANDERSON, ROBERT JOHN GS AC 83 90 91
1414 MEDICAL CENTER DR.
WILMINGTON 28401 919 763-7363
U OF MINN

CLANCY, THOMAS V. GS /TRS AC 79 82 88
2131 S. 17TH ST.
WILMINGTON 28402 919 343-0161
U OF EAST

CODINGTON, JOHN BONNELL GS L/RT 53 53 58
624 FOREST HILSL DR.
WILMINGTON 28403 919 763-6289
U OF MARYLAND

DICKIE, JAMES WILLIAM GS L/RT 42 47 47
448 WAYNE DRIVE
WILMINGTON 28403 919 762-8429
U OF VIRGINIA

FALES, ROBERT MARTIN GS L/RT 32 32 36
407 W. RENOVAH CIRCLE
WILMINGTON 28403 919 762-1285
JEFFERSON

GOUDARZI, HORMOZE ABBAS GS AC 72 84 89
1607 DOCTOR'S CIRCLE
WILMINGTON 28401 919 763-6571
U OF LONDON

GRAHAM, CHARLES PATTISON GS L/RT 32 32 37
201 FOREST HILLS DRIVE
WILMINGTON 28403 919 762-0385
HARVARD

KNOTT, LAWRENCE H., JR. GS /CDS AC 72 72 80
1922 TRADD COURT
WILMINGTON 28401 919 343-0296
BOWMAN GRAY

MARKS, HOWARD F., JR. GS /VS AC 81 81 88
1501 MEDICAL CENTER DR.
WILMINGTON 28401 919 763-6289
U OF VIRGINIA

MASON, LOCKERT BEMISS GS L/RT 45 45 52
1224 COUNTRY CLUB RD.
WILMINGTON 28403 919 762-1520
MED COLL OF VA

MAXWELL, JOHN GARY GS AC 58 62 86
2131 S. 17TH ST.
WILMINGTON 28402 919 343-0161
U OF UTAH

MCMURRY, WARREN W. GS /VS AC 81 82 86
1922 TRADD COURT
WILMINGTON 28401 919 343-0811
U OF NC

MILES, DAVID RALPH GS AC 85 86 91
1414 MEDICAL CENTER DR.
WILMINGTON 28401 919 763-7363
U OF MICHIGAN

MOORE, HORACE GREELEY, JR. GS /TS AC 45 53 53
1414 MEDICAL CENTER DRIVE
WILMINGTON 28401 919 763-7363
JOHNS HOPKINS

NASRALLAH, NASEEM H. GS AC 65 74 90
PO BOX 548
BURGAW 28425 919 259-2161
CAIRO U

PAYNE, JOSEPH MINTER GS /CRS AC 84 85 90
1501 MEDICAL CENTER DR.
WILMINGTON 28401 919 763-6289
U OF NC

SCOTT, CHARLES MATTHEW GS /VS AC 75 80 83
1501 MEDICAL CENTER DR.
WILMINGTON 28401 919 763-6289
U OF CINCINNATI

SMALLEY, ROBERT ROWAN GS RT 54 54 73
415 BUCCANEER RD.
WILMINGTON 28409
MCGILL U

TACKETT, AMOS DARRELL GS AC 69 74 79
1922 TRADD CT.
WILMINGTON 28401 919 343-0811
VANDERBILT U

TAN, RICARDO MIJARES GS /ABS RT 58 67 67
1402 ROBINHOOD RD.
WILMINGTON 28401 919 762-7166
U OF SANTO TOMAS

TINSLEY, ELLIS ALLAN, SR. GS /TS AC 59 67 67
1414 MEDICAL CENTER DRIVE
WILMINGTON 28401 919 763-7363
VANDERBILT U

WILKINSON, CHARLES ALBERT GS /TS AC 56 56 64
1501 MEDICAL CENTER DRIVE
WILMINGTON 28401 919 763-6289
DUKE

WILLIAMS, R. BERTRAM, JR. GS /TS L 43 49 51
1414 MEDICAL CENTER DRIVE
WILMINGTON 28401 919 763-7363
VANDERBILT U

65. NEW HANOVER-PENDER COMPONENT SOCIETY (Continued)

'UE, BYONG HAK GS AC
1810 GLEN MEADE ROAD 59 71 73
WILMINGTON 28403 919 762-1730
CHUN NAM U

'NECOLOGY

BEAR, SIGMOND AARON GYN L/RT
3712-B RESTON COURT 48 52 52
WILMINGTON 28403 919 799-3103
JOHNS HOPKINS

BROWN, ALBERT BELMONT GYN L
1615 DOCTOR'S CIR. 43 67 67
WILMINGTON 28401 919 343-1122
QUEENS U

SCHWEIZER, DONALD CONRAD GYN L
1009 BAY HEAD CIRCLE 43 47 48
WILMINGTON 28405 919 379-8460
MED COLL OF VA

VALKER, ELMER PIXLEY GYN L/RT
20 FOREST HILLS DR. 36 36 41
WILMINGTON 28403 919 763-8307
EMORY U

VEINEL, WILLIAM HARVEY GYN AC
1809 GLEN MEADE ROAD 54 54 58
WILMINGTON 28403 919 763-9833
U OF NC

EMATOLOGY

GOTTSCHALK, BERNARD J. HEM /ON AC
1202 MEDICAL CENTER DR. 81 82 86
WILMINGTON 28401 919 762-2990
U OF PITTSBURGH

MANCUSI-UNGARO, PETER CURT HEM /ON AC
2131 S. SEVENTEENTH STREET 68 69 75
WILMINGTON 28401 919 343-0161
U OF MIAMI

IFECTIOUS DISEASES

HARRIS, JEFFREY E. ID /IM AC
1515 DOCTORS CIR. 81 83 89
WILMINGTON 28401 919 763-5182
MED COLL OF GA

ITERNAL MEDICINE

ALLEN, WILLIAM GILES IM /PUD AC
1515 DOCTOR'S CIR. 76 81 82
WILMINGTON 28401 919 343-0614
BOWMAN GRAY

ANDREWS, LEON POLK IM RT
1902 DRUID LANE 45 53 53
WILMINGTON 28403 919 343-0167
HARVARD

ANDREWS, ROBERT JACKSON IM AC
5305 WRIGHTSVILLE AVENUE 46 48 51
WILMINGTON 28403 919 791-2626
U OF TENNESSEE

CAUGHEY, DALE WELLS, JR. IM AC
5305-A WRIGHTSVILLE AVENUE 70 70 73
WILMINGTON 28403 919 799-4220
DUKE

DAUM, CATHERINE ANNE IM AC
1202 MEDICAL CENTER DR. 86 88 90
WILMINGTON 28401 919 341-3422
U OF MARYLAND

EAKINS, JOEY WILLIAM IM /ID AC
6436 QUAIL RUN ROAD 70 70 72
WILMINGTON 28409 919 343-9991
BOWMAN GRAY

EATON, HUBERT ARTHUR, JR. IM AC
P. O. BOX 982 69 69 74
WILMINGTON 28401 919 763-5453
MEHARRY MED COLL

GARG, SHYAM LAL IM AC
HAMPSTEAD MEDICAL CTR. 76 81 87
HAMPSTEAD 28443 919 270-2722
GOVERNMENT MC

GONZALEZ, JORGE JOSE IM /END AC
2131 S. 17TH STREET 71 76 79
WILMINGTON 28401 919 343-0161
U OF CHILE

HAINES, RICHARD LITTLETON IM /GP AC
HIGHWAY 17, 47 47 82
P. O. BOX 565
HAMPSTEAD 28443 919 270-3561
U OF VIRGINIA

MACKAY, JAMES CALVIN IM /PUD L/RT
302 W. RENOVAH CR. 47 54 54
WILMINGTON 28403 919 762-1529
BOWMAN GRAY

MARSHBURN, ELISHA THOMAS, JR. IM AC
1906 MEETING COURT 47 48 54
WILMINGTON 28401 919 762-9621
BOWMAN GRAY

MOELLER, MICHAEL JOHN IM /CD AC
1515 DOCTORS CIRCLE 78 78 88
WILMINGTON 28401 919 763-5182
SUNY-SYRACUSE

MOORE, ROBERT ALEXANDER, III IM /NEP AC
1302 MEDICAL CENTER DR. 84 85 82
WILMINGTON 28401 919 343-9800
BOWMAN GRAY

O'BRIEN, MARY ELIZABETH IM /GER AC
2131 S. 17TH ST. 80 82 89
WILMINGTON 28402 919 343-0161
U OF MASS

PAPE, GREGORY SCOTT IM /PUD AC
1515 DOCTORS CIRCLE 84 87 90
WILMINGTON 28401 919 763-5182
U OF NC

PASQUARIELLO, JOHN P., JR. IM AC
1202 MEDICAL CENTER DR. 83 85 90
WILMINGTON 28401 919 341-3300
GEORGETOWN U

PICKARD, HENRY MACK IM L/RT
P. O. BOX 3351 38 38 46
WILMINGTON 28401 919 791-1417
MCGILL U

PIGFORD, ROBERT TOMS IM /CD L/RT
301 COLONIAL DRIVE 40 40 47
WILMINGTON 28403 919 762-5020
U OF MARYLAND

POINTS, GERALD LEE, II IM /FP AC
5305 WRIGHTSVILLE AVE. BLDG.B 65 66 66
WILMINGTON 28403 919 791-3506
U OF KENTUCKY

RALLIS, MICHAEL GEORGE IM AC
301 S. MCNEIL ST. 77 79 81
PO BOX 1179
BURGAW 28425 919 259-5011
GEO WASHINGTON U

RHYNE, JANELLE AROLYN IM /ID AC
1202 MEDICAL CENTER DR. 83 84 80
WILMINGTON 28401 919 341-3344
BOWMAN GRAY

SWIRAT, THEODORE BEN IM AC
PO BOX 780 77 78 90
WILMINGTON 28402 919 675-5333
ALBANY MED COLL

THOMPSON, NEAL THORNTON IM AC
1928 S. 16TH ST. 83 85 90
WILMINGTON 28401 919 762-5292
U OF NC

TIDLER, JAMES IM L
1919 S. SIXTEENTH STREET 44 49 50
WILMINGTON 28401 919 763-8184
MED COLL OF VA

WARSHAUER, SAMUEL EDWARD IM /CD L
2917 HYDRANGEA PL. 36 36 46
WILMINGTON 28403 919 762-8388
MED COLL OF VA

WERK, EMILE EUGENE, JR. IM /END AC
2131 S. SEVENTEENTH STREET 46 46 73
WILMINGTON 28401 919 343-0161
U OF CINCINNATI

WHITESIDES, PAUL CALDWELL,JR. IM/END AC
1515 DOCTOR'S CIR. 77 82 85
WILMINGTON 28401 919 763-1219
MED U OF SC

WILSON, JACK KENNEDY, JR. IM AC
637 S. KERR AVENUE 66 66 71
WILMINGTON 28403 919 799-1810
U OF MISSISSIPPI

WITHERS, SYDNOR TERRY, JR. IM /FP AC
5305 WRIGHTSVILLE AVE. 73 75 76
GLDG 5305-E
WILMINGTON 28403 919 791-5426
MED COLL OF VA

WORTMAN, JAMES EDWARD IM /ON AC
1912 MEETING COURT 74 74 79
WILMINGTON 28401 919 251-0811
NORTHWESTERN U

NEUROLOGY

CHEN, CHIH-CHENG FRANK N AC
1608 WELLINGTON AVENUE 69 77 82
WILMINGTON 28401 919 395-5521
TAIPEI MED COLL

COIN, JAMES THADDEUS N AC
1515 DOCTOR'S CIRCLE 84 85 88
WILMINGTON 28401 919 763-5182
DUKE

DEBECK, THOMAS WADE N AC
29 SANDY PLACE 64 64 87
WILMINGTON 28405 919 686-7522
U OF MARYLAND

GILLEN, HOWARD WILLIAM N AC
1301 CYPRESS GROVE DR. 49 50 73
WILMINGTON 28401 919 762-8501
U OF ILLINOIS

ROYAL, MARGIT E. N /IM AC
1515 DOCTORS CIRCLE 83 84 89
WILMINGTON 28401 919 763-1219
U OF NEBRASKA

SOLOMON, DONALD JEFFREY N AC
1310 MEDICAL CENTER DR. 81 81 81
WILMINGTON 28401 919 341-3300
STANFORD U

NEPHROLOGY

ALMKUIST, RALPH DURWOOD, II NEP /IM AC
1302 MEDICAL CENTER DRIVE 71 71 78
WILMINGTON 28401 919 343-9800
BOWMAN GRAY

HERION, JOHN M. NEP /IM AC
2215 YAUPON DR. 83 83 88
WILMINGTON 28401 919 343-0664
U OF NC

NIXON, WILLIAM PRESTON, JR. NEP /IM AC
1302 MEDICAL CENTER DRIVE 68 68 74
WILMINGTON 28401 919 763-3651
MED COLL OF VA

NEUROLOGICAL SURGERY

MOORE, ROBERT ALEX, JR. NS AC
1404 MEDICAL CENTER DRIVE 51 52 60
WILMINGTON 28401 919 763-6578
BOWMAN GRAY

PARKER, WILLIAM PAXTON, JR. NS AC
1303 CYPRESS GROVE DR. 56 57 74
WILMINGTON 28401 919 762-1804
VANDERBILT U

SATTLER, RAYMOND LOUIS NS AC
1602 DOCTORS CIRCLE 77 77 83
WILMINGTON 28401 919 762-3111
CASE WESTERN RES

OBSTETRICS AND GYNECOLOGY

ASSEVERO, MICHAEL LAWRENCE OBG/GYN AC
916 17TH ST. S 81 81 85
WILMINGTON 28401 919 762-3290
MEHARRY MED COLL

65. NEW HANOVER-PENDER COMPONENT SOCIETY (Continued)

BUNN, DAVID GLENN, JR. OBG AC
2215 CANTERWOOD DR. 75 76 80
WILMINGTON 28401 919 763-1031
U OF NC

CRACKER, ANDREW ROBERT OBG AC
1809 GLEN MEADE ROAD 62 67 67
WILMINGTON 28401 919 763-9833
MED U OF SC

CREIGHTON, ROBERT KILGO OBG /LM AC
6442 SHINNWOOD RD. 61 61 70
WILMINGTON 28409 919 350-0006
U OF NC

DALEY, JOHN GILBERT OBG /END AC
2143 ECHO LANE 55 56 77
WILMINGTON 28403 919 343-0161
YALE

FICKLEN, CONWAY HAMILTON OBG RT
PO BOX 10338 54 59 59
WILMINGTON 28405 919 256-3554
U OF VIRGINIA

HENTZ, SUZANNE K. OBG AC
5305-J WRIGHTSVILLE AVE. 84 85 82
WILMINGTON 28401 919 799-2168
EAST CAROLINA U

JOHNSON, HEBER WELLINGTON OBG/GS L/RT
417 BRADLEY CREEK POINT 39 47 48
WILMINGTON 28403 919 256-2040
HARVARD

MASON, DAVID PENDLETON OBG AC
1809 GLEN MEADE ROAD 75 76 79
WILMINGTON 28403 919 762-9807
U OF NC

O'QUINN, EDWARD NELSON OBG L/RT
115 S. CHANNEL DR. 51 51 56
WRIGHTSVILLE BEACH 28480 919 256-2766
EMORY U

ORMAND, JOHN WILLIAM, JR. OBG AC
1809 GLEN MEADE ROAD 56 56 60
WILMINGTON 28401 919 763-1505
U OF NC

POLE, DONALD TALIAFERRO OBG AC
5305-J WRIGHTSVILLE AVE. 73 78 82
WILMINGTON 28403 919 799-2168
AUTONOMA UNIV

PRICE, JAMES LOUIS, III OBG AC
1612 DOCTOR'S CIRCLE 75 75 80
WILMINGTON 28401 919 763-9015
U OF NC

RIEMAN, GILBERT FLETCHER OBG RT
214 CABBAGE INLET LN. 52 52 73
WILMINGTON 28409 919 392-5903
U OF VIRGINIA

ROBERSON, WILLIAM EARL OBG AC
5305-L WRIGHTSVILLE AVE. 66 66 73
WILMINGTON 28403 919 791-5556
U OF NC

ROBERTS, LLOYD EUGENE OBG AC
1612 DOCTOR'S CIRCLE 69 72 79
WILMINGTON 28401 919 763-9015
U OF COLORADO

SHAH, RAMESH MANHARLAL OBG AC
116 ROBERT E. LEE DRIVE 64 67 73
WILMINGTON 28401 919 791-2301
BARODA U

STEWART, GEORGE TERRY OBG AC
2215 CANTERWOOD DRIVE 71 71 75
WILMINGTON 28401 919 343-1031
U OF NC

SWAN, ROBERT WM. 145 /ON AC
2131 S. 17TH ST. 65 65 87
WILMINGTON 28402 919 343-0161
NORTHWESTERN U

TAYLOR, BRITTON EDGAR OBG AC
2215 CANTERWOOD DRIVE 63 63 74
WILMINGTON 28401 919 343-1031
MED COLL OF VA

TEMPLE, RUFUS HENRY, JR. OBG AC
2215 CANTERWOOD DR. 76 76 81
WILMINGTON 28401 919 343-1031
U OF NC

WILSON, CLARENCE LAFAYETTE, II OBG AC
1809 GLEN MEADE ROAD 74 75 82
WILMINGTON 28403 919 763-9833
U OF LOUISVILLE

OCCUPATIONAL MEDICINE

SMITH, PHILIP PALMER OM /IM AC
P. O. BOX 2042 62 62 71
WILMINGTON 28402 919 371-4080
U OF ILLINOIS

ONCOLOGY

ANAGNOST, JOHN WILLIAM ON /HEM AC
1515 DOCTORS CIRCLE 78 86 86
WILMINGTON 28401 919 763-5182
JEFFERSON

HUNTER, JOHN DANE ON /HEM AC
1202 MEDICAL CENTER DRIVE 76 78 82
WILMINGTON 28403 919 762-2990
DUKE

OPHTHALMOLOGY

ALLEN, MOLLY VIRGINIA OPH AC
1120 MEDICAL CENTER DR. 80 80 85
WILMINGTON 28401 919 763-7316
U TX-SAN ANTONIO

BLACK, PAUL ADRIAN L. OPH L
553 OLEANDER DR. 33 33 38
WILMINGTON 28403
LOMA LINDA U 919 799-2226

BUTLER, FREDERICK CLARENCE, JR OPH AC
1915 GLEN MEADE ROAD 61 61 67
WILMINGTON 28403 919 763-3601
DUKE

KASH, STEPHEN LEE OPH AC
1120 MEDICAL CENTER DRIVE 68 68 76
WILMINGTON 28401 919 763-7316
WASHINGTON U

KELLY, TIMOTHY GERALD OPH AC
1904 TRADD CT. 84 84 89
WILMINGTON 28401 919 762-0057
U OF ALABAMA

KESLER, JAMES L. OPH AC
1120 MEDICAL CENTER DRIVE 75 76 80
WILMINGTON 28401 919 763-7316
WASHINGTON U

MALOY, THOMAS HOWARD OPH AC
2310 DELANEY AVENUE 71 71 80
WILMINGTON 28401 919 763-3664
U OF ALABAMA

POOLE, ERNEST TILGHMAN OPH /P AC
2310 DELANEY AVE E 61 61 72
WILMINGTON 28403 919 763-3664
DUKE

SLOAN, DAVID BRYAN, JR. OPH AC
1915 GLEN MEADE ROAD 63 63 70
WILMINGTON 28403 919 763-3601
U OF PENN

SLOAN, JAMES BOYKIN OPH AC
1915 GLEN MEADE ROAD 70 70 74
WILMINGTON 27403 919 763-3601
U OF NC

ORTHOPEDIC SURGERY

ANDERSON, LANDON BUTLER ORS AC
1222 MEDICAL CENTER DRIVE 72 78 79
WILMINGTON 28401 919 763-2977
VANDERBILT U

CRAVEN, THOMAS, JR. ORS AC
2001 S. 17TH STREET 58 58 64
WILMINGTON 28401 919 763-7344
U OF NC

DINEEN, JAMES ROBERT ORS AC
1616 MEDICAL CENTER DRIVE 45 58 65
WILMINGTON 28401 919 762-2655
U OF ROCHESTER

DORMAN, BRUCE HUGH ORS AC
2001 S. 17TH STREET 48 55 55
WILMINGTON 28401 919 763-7344
DUKE

ESPOSITO, DAVID ANTHONY ORS AC
1616 MEDICAL CENTER DR. 84 85 9
WILMINGTON 28401 919 762-265
U OF CONNECTICUT

FOSTER, MARK DUPREE ORS AC
2001 S. 17TH ST. 83 83 8
WILMINGTON 28401 919 763-734
MED U OF SC

GETZ, DONALD DAVID ORS AC
1616 MEDICAL CENTER DRIVE 66 66 7
WILMINGTON 28401 919 762-265
JEFFERSON

HUNDLEY, JAMES DAVENPORT ORS AC
2001 S. 17TH STREET 67 67 7
WILMINGTON 28401 919 763-734
U OF NC

MARKWORTH, JAMES WARREN ORS AC
1222 MEDICAL CENTER DRIVE 69 70 7
WILMINGTON 28401 919 763-297
HARVARD

MOORE, ROBERT MORGAN ORS AC
2001 S. 17TH STREET 75 81 8
WILMINGTON 28401 919 763-734
VANDERBILT U

NANCE, CHARLES LEE, JR. ORS AC
2001 S. 17TH STREET 59 59 6
WILMINGTON 28401 919 763-734
DUKE

SCULLY, KEVIN SLEAN ORS AC
1616 MEDICAL CENTER DR. 78 80 8
WILMINGTON 28401 919 762-265
U OF VIRGINIA

SEIDEL, MURRAY KAYE ORS AC
1222 MEDICAL CENTER DRIVE 65 66 7
WILMINGTON 28401 919 763-297
U OF PENN

WEIS, WALTER FRANCIS, JR. ORS AC
5305 WRIGHTSVILLE AVE. BLDG. C 66 67 7
WILMINGTON 28403 919 799-941
JEFFERSON

OTOLARYNGOLOGY

BOTROS, SHERIF BOTROS OTO AC
1625 DOCTOR'S CIRCLE 75 79 81
WILMINGTON 28401 919 762-023
U OF NC

CALLAWAY, SAMUEL CLAYTON, JR. OTO AC
2311 DELANEY ROAD 63 63 72
WILMINGTON 28403 919 762-875
EMORY U

FULK, ROBERT VERNON, JR. OTO AC
2311 DELANEY AVENUE 65 65 74
WILMINGTON 28403 919 762-875
U OF NC

JONES, ROBERT BOYD OTO AC
2311 DELANEY ROAD 64 64 72
WILMINGTON 28403 919 762-875
U OF VIRGINIA

MCMURRY, JOHN EUGENE, JR. OTO AC
2311 DELANEY AVE. 80 82 86
WILMINGTON 28401 919 762-875
U OF NC

POLLOCK, HOKE DICKINSON OTO AC
1625 DOCTOR'S CIRCLE 75 75 81
WILMINGTON 28401 919 762-023
U OF NC

PSYCHIATRY

COLEMAN, ELIZABETH ANNE P AC
5016 CLEAR RUN DR. 83 85 87
WILMINGTON 28403 919 763-951
U OF NC

DUROCHER, KEVIN HOWARD P AC
2311 CANTERWOOD DR. 81 85 85
WILMINGTON 28401 919 762-960
U OF WISCONSIN

EWING, JOHN ALEXANDER P AC
2311 CANTERWOOD DR. 46 46 55
WILMINGTON 28401 919 251-9888
U OF EDINBURGH

65. NEW HANOVER-PENDER COMPONENT SOCIETY (Continued)

SSCHER, ROLF HENDRIK P /N AC
2023 S. 17TH ST. 55 62 64
WILMINGTON 28401 919 343-0151
U OF LEIDEN

CMILLAN, JAMES FULFORD P L/RT
1301 LIVE OAK PARKWAY 47 48 52
WILMINGTON 28403 919 762-8178
BOWMAN GRAY

OBISON, WILLIAM PETERSON P AC
114 TARA DR. 51 51 78
WILMINGTON 28409 919 251-6467
MED COLL OF GA

ERNON, CHARLES ROBERTSON P AC
7230 WRIGHTSVILLE AVENUE 52 52 56
WILMINGTON 28403 919 256-4106
CASE WESTERN RES

/EINSTEIN, ROBERT HARVEY P AC
2595 S. 17TH ST. 67 67 75
WILMINGTON 28401 919 799-2283
U OF MISSOURI

/ILSON, ROBERT WAYNE P AC
1404 MEDICAL CENTER DR. 86 87 85
WILMINGTON 28401 919 763-8134
EAST CAROLINA U

DIATRICS

OLEMAN, GORDON DONALD PD AC
1920 S. 16TH ST. 75 76 79
WILMINGTON 28401 919 763-2072
MED U OF SC

OREHAND, MARY L. PD AC
1628 DOCTORS CIR. 83 84 87
WILMINGTON 28401 919 763-2476
U OF NC

AWTHORNE, HENRY CLAIBORNE, JR PD AC
1920 S. 16TH STREET 67 67 74
WILMINGTON 28401 919 763-2072
U OF VIRGINIA

ICKS, CHARLES MONTGOMERY PD AC
1914 GLEN MEADE ROAD 62 62 73
WILMINGTON 28403 919 762-2651
U OF NC

NOX, ANGELINA VINLUAN EDRALIN PD AC
2304 DELANEY AVENUE 59 59 72
WILMINGTON 28403 919 763-3349
U OF SANTO TOMAS

OSERUBA, GEORGE MICHAEL PD L/RT
9-F THE ISLANDER 40 42 44
WRIGHTSVILLE BEACH 28480 919 256-3276
LOMA LINDA U

IAY, JEANNINE MEECE PD AC
5305-N WRIGHTSVILLE AVE. 81 82 86
WILMINGTON 28403 919 392-5634
U OF SOU FLORIDA

IOORE, RALPH BRYAN, JR. PD AC
CHILDREN'S CLINIC 52 56 56
1920 16TH STREET
WILMINGTON 28401 919 763-2072
CORNELL U

IORGAN, HERMAN GRADY, JR. PD AC
1920 S. 16TH ST. 77 78 84
WILMINGTON 28401 919 762-3942
U OF NC

EYNOLDS, FRANK RUSSELL PD L
1613 DOCK STREET 44 44 50
WILMINGTON 28401 919 763-4272
U OF PENN

/ATSON, MELVIN E. PD AC
5305-N WRIGHTSVILLE AVE. 73 74 88
WILMINGTON 28403 919 392-5634
HAHNEMANN

.ASTIC SURGERY

:ROHN, JOHN RAMON PS AC
2305 CANTERWOOD DR. 66 67 75
WILMINGTON 28401 919 343-0119
U OF MINN

NAVA, VICTOR MANUEL PS AC
2209 DELANEY AVE. 75 76 88
WILMINGTON 28403 919 763-7617
NAT U OF MEXICO

NICKS, DENNIS BART PS /HS AC
2305 CANTERWOOD 77 77 83
WILMINGTON 28401 919 343-0119
U OF MISSOURI

SAMPSON, JOSEPH LUTHER, JR. PS /GS AC
1902 TRADD CT., HOSPITAL PLAZA 61 61 78
WILMINGTON 28401 919 343-9774
MED COLL OF VA

WELLS, EDWIN JULIUS PS L/RT
2205 GILLETTE DR. 46 46 53
WILMINGTON 28403 919 763-7617
U OF PENN

WHITE, KENNETH SAMUEL PS /GS AC
2305 CANTERWOOD DR. 83 84 90
WILMINGTON 28401 919 343-0119
BOWMAN GRAY

PATHOLOGY, ANATOMICAL AND CLINICAL

JORDAN, HENRY DAVIDSON PTH AC
P. O. BOX 9000 66 67 75
WILMINGTON 28402 919 343-7074
EMORY U

LEACH, WILLIAM B. PTH L/RT
306 WIDGEON DR. 44 44 70
HAMPSTEAD 28443 919 270-4772
U OF MANITOBA

MCCOY, RALPH CARLISLE PTH AC
6320 S. BRADLEY OVERLOOK 67 68 76
WILMINGTON 28403 919 343-7074
EMORY U

SINGLETARY, HENRY PATE PTH AC
2131 S. 17TH ST. 53 56 60
WILMINGTON 28401 919 343-7074
NORTHWESTERN U

SOLOMON, ROBERT DOUGLAS PTH /GER RT
113 S. BELVEDERE DR. 42 42 86
HAMPSTEAD 28443 919 270-2019
JOHNS HOPKINS

VARNER, D. WAYNE PTH AC
346 HONEYCUTT DR. 76 78 84
WILMINGTON 28403 919 395-8177
MED U OF SC

WOLFORD, JERALD F. PTH AC
6212 N. BRADLEY OVERLOOK 83 84 88
WILMINGTON 28403 919 323-6149
U OF NEBRASKA

PULMONARY DISEASES

BROWN, STEVE DUNNING PUD AC
1719 S. LIVE OAK PKWY. 83 83 88
WILMINGTON 28403 919 341-3376
U OF TEXAS

CREDLE, WILLIAM FRONTIS, JR. PUD /IM AC
1202 MEDICAL CENTER DRIVE 67 67 75
WILMINGTON 28401 919 763-8251
MED COLL OF VA

DUNN, THADDEUS L. PUD /CC AC
1515 DOCTORS CIRCLE 77 87 87
WILMINGTON 28401 919 763-5182
DUKE

GOTTOVI, DANIEL PUD /IM AC
1202 MEDICAL CENTER DRIVE 65 65 71
WILMINGTON 28401 919 341-3300
U OF ROCHESTER

RADIOLOGY

BLACK, JOHN ALEXANDER R AC
102 TRAIL IN THE PINES ST. 81 84 80
WILMINGTON 28409 919 343-7000
BOWMAN GRAY

COMBS, JOHN GILBERT, JR. R AC
2318 BLYTHE ROAD 66 66 73
WILMINGTON 28403 919 259-5451
U OF TENNESSEE

FISCHER, JOSEPH WILLIAM R AC
4608 CEDAR ST., STE. 112 67 68 90
WILMINGTON 28403 919 395-4668
U OF TENNESSEE

JAMES, JOSEPH MCCRAW R AC
2622 MIMOSA PLACE 55 55 63
WILMINGTON 28403 919 343-7069
DUKE

JOHNSON, DONALD GENE R /NR AC
2212 DELANEY AVENUE 74 75 84
WILMINGTON 28403 919 383-7070
WEST VA U

MORRIS, KENNY JORDAN R AC
216 OYSTER BAY LN. 62 62 68
WILMINGTON 28409 919 343-7069
U OF NC

POINT, STUART WATKINS R /NR C
2212 DELANEY AVE. 83 90 90
WILMINGTON 28403 919 762-3882
WEST VA U

RAGOZZINO, MARK WM. R AC
2212 DELANEY AVE. 82 82 87
WILMINGTON 28403 919 762-3882
MAYO MED SCHOOL

STANLEY, JOHN H., JR. R AC
2212 DELANEY AVE. 77 77 87
WILMINGTON 28403 919 762-3882
U OF NC

RHEUMATOLOGY

HARSHBARGER, JOHN LYNN RHU /IM AC
1202 MEDICAL CENTER DR. 80 82 86
WILMINGTON 28401 919 341-3350
TEMPLE U

SCHIMIZZI, GREGORY F. RHU /IM AC
1202 MEDICAL CENTER DR. 76 76 87
WILMINGTON 28401 919 341-3300
WAYNE STATE U

THERAPEUTIC RADIOLOGY

MEYERSON, MARTIN BENJAMIN TR AC
1988 S. 16TH ST. 68 69 77
NEW HANOVER RAD. ONCOLOGY
WILMINGTON 28401 919 251-1839
U OF ILLINOIS

UROLOGICAL SURGERY

CASHMAN, JOHN U AC
1905 GLEN MEADE ROAD 65 66 73
WILMINGTON 28403 919 763-6251
JEFFERSON

HOOPER, JOSEPH WARD, JR. U L/RT
2216 GILLETTE DR. 46 46 53
WILMINGTON 28403 919 763-6251
HARVARD

LOVETT, JOHN WILSON U AC
1905 GLEN MEADE RD. 82 83 87
WILMINGTON 28403 919 763-6251
U OF KENTUCKY

MOBLEY, THOMAS BARNETT, III U AC
236 BEACH ROAD, NORTH 72 73 78
WILMINGTON 28405 800 682-7971
MED COLL OF GA

MYNATT, RICHARD JOSEPH U AC
1905 GLEN MEADE RD. 77 78 90
WILMINGTON 28403 919 763-6251
U OF TENNESSEE

NICHOLS, ROBERT VANCE U AC
1905 GLEN MEADE RD. 85 86 90
WILMINGTON 28401 919 763-6251
U OF NC

SHEARIN, WILBURN THADDEUS, JR. U AC
1905 GLEN MEADE ROAD 54 54 56
WILMINGTON 28403 919 763-6251
BOWMAN GRAY

66. NORTHAMPTON COMPONENT SOCIETY

OFFICERS—**President:** A. Jeffrey Burton, M.D., P.O. Box 710, Rich Square 27869 (919 539-2082)

GENERAL PRACTICE

STEPHENSON, BENNETTE EDWARD GP L/RT
P. O. BOX 348 35 35 37
RICH SQUARE 27869 919 539-2343
MED COLL OF VA

INTERNAL MEDICINE

DELOATCH, RAVEN LIONEL IM C
PO BOX 86 84 87 90
MILWAUKEE 27854 919 534-1661
EAST CAROLINA U

67. ONSLOW COMPONENT SOCIETY

OFFICERS—**President:** Wesley F. Hambright, M.D., Jacksonville 28546 (919 353-4333)
Secretary: Noel B. Rogers, M.D., 128 Memorial Dr., Jacksonville 28546 (919 353-4000)
Executive Director: Charles L. Garrett, Jr., M.D., Onslow Memorial Hospital, Jacksonville 28540 (919 353-3498)

ALCOHOL & DRUG ABUSE

FOX, RAYMOND MORRIS, JR. ALD /ADM AC
215 MEMORIAL DR. 64 65 74
JACKSONVILLE 28546 919 353-5118
VANDERBILT U

ANESTHESIOLOGY

BLUE, DANIEL WILLIAM AN AC
ONSLOW MEM. HOSPITAL 70 70 85
DEPT. OF ANES
JACKSONVILLE 28540 919 462-2011
BOWMAN GRAY

OLSEN, KENNETH GEORGE AN AC
137 COKE PLACE 67 67 74
JACKSONVILLE 28540 919 455-0188
U OF COLORADO

CARDIOVASCULAR DISEASES

BIANCHI, EDGARDO HUGO CD /IM AC
1703 COUNTRY CLUB RD. STE. 202 69 68 80
JACKSONVILLE 28540 919 455-9600
U OF ROSARIO

DERMATOLOGY

REICHLING, GEORGE HENRY D AC
300 WESTERN BLVD. 57 58 85
JACKSONVILLE 28540 919 577-7288
JEFFERSON

DIAGNOSTIC RADIOLOGY

HOWARD, GEORGE ALBERT, III DR AC
299 DOCTORS DR. 82 86 79
JACKSONVILLE 28546 919 577-1171
EAST CAROLINA U

WHITEHURST, WALTER CLAYTON,JR. DR AC
201 DEBORAH DRIVE 68 68 75
JACKSONVILLE 28540 919 577-2274
U OF NC

EMERGENCY MEDICINE

LARSON, JOHN DAVID, JR. EM /OBG L
204 GREEN DOLPHIN ST. 43 47 59
MOREHEAD CITY 28557 919 247-2097
GEO WASHINGTON U

WHITLOCK, GARY THOMAS, III EM /ALD C
104 LESLIE DR. 78 80 81
HUBERT 28539 919 451-4840
U OF NC

FAMILY PRACTICE

GEROCK, HENRY FP AC
200 DOCTOR'S DRIVE, SUITE M 63 63 69
JACKSONVILLE 28540 919 353-7600
U OF NC

KITCHEN, THOMAS WARD, JR. FP AC
6 E. BAYSHORE BLVD. 59 59 60
JACKSONVILLE 28540 919 347-1788
BOWMAN GRAY

MEASE, WILLIS EUGENE FP AC
209 S. CHURCH ST. 45 45 48
RICHLANDS 28574 919 324-3105
U OF NEBRASKA

PRATT, LAURA WINSTEAD FP AC
329 TRAILS END RD., UNIT #3 72 72 74
WILMINGTON 28409 919 392-6672
BOWMAN GRAY

SIMPSON, MARSHALL CRAIG FP AC
COASTAL FAMILY CLINIC 87 88 90
410 NEW BRIDGE ST.
JACKSONVILLE 28540 919 347-1788
EAST CAROLINA U

STREETER, GREGORY DEAN FP /DIA AC
200 DOCTOR'S DR. SUITE H 80 80 80
JACKSONVILLE 28546 919 353-0565
U OF NC

TURLINGTON, WADE ROBERT FP AC
200 DOCTOR'S DRIVE, SUITE M 69 69 73
JACKSONVILLE 28540 919 353-8100
U OF NC

WARREN, RUFUS H. FP AC
RT. #1, BOX 257 61 61 89
SNEADS FERRY 28460 919 327-2015
MED COLL OF VA

GASTROENTEROLOGY

ISSA, MAHMOUD A. GE /IM AC
224 MEMORIAL DR. STE. A 71 71 80
JACKSONVILLE 28540 919 577-1444
DAMASCUS U

GENERAL PRACTICE

CHUNG, HONG-YILL GP AC
407 CARMEN AVENUE 69 69 79
JACKSONVILLE 28540 919 353-2800
KOREA U

REICHLING, PIRKKO ESTERI GP AC
300 WESTERN BLVD. 70 80 85
JACKSONVILLE 28540 919 353-0176
U OF OULU

GENERAL SURGERY

BATCHELLER, EDGAR HADLEY, JR. GS/TS AC
P. O. BOX 1000 64 64 71
JACKSONVILLE 28540 919 353-2194
U OF VIRGINIA

GALLAGHER, EDGAR GIVENS, JR. GS /TS AC
1013 SCHALL PLACE 65 65 76
JACKSONVILLE 28540 919 353-7848
U OF NC

LOWERY, RUSSELL C., III GS /VS AC
ONSLOW SURGICAL CLINIC 63 63 87
200 DOCTORS DR. STE. L
JACKSONVILLE 28540 919 577-1228
TULANE U

PIVER, JAMES DECAMP GS /ABS L/R
1002 SCHALL PLACE 43 44 5
JACKSONVILLE 28540 919 455-378
U OF PENN

GYNECOLOGY

DILL, FRANKLIN GEORGE GYN AC
124 MEMORIAL DRIVE 63 67 6
JACKSONVILLE 28546 919 353-774
CORNELL U

HEAD, CHARLES M. GYN AC
304 AUGUSTA CT. 57 57 8
NEW BERN 28562 919 455-628
U OF ALABAMA

INTERNAL MEDICINE

TAJ-ELDIN, ADNAN IM /A AC
200 DOCTOR'S DR. STE. I 72 75 7
JACKSONVILLE 28546 919 353-632
DAMASCUS U

THELAN, KENNETH MACLACHLAN IM C
1101 WESTMORELAND 75 78 7
JACKSONVILLE 28540 919 455-854
U OF MICHIGAN

THELAN, VIRGINIA BLEVINS IM C
1101 WESTMORELAND DR. 82 84 8
JACKSONVILLE 28540 919 768-473
MARSHALL U

TSE, ANDRE KON SANG IM /CD AC
158 MEMORIAL COURT 71 74 7
JACKSONVILLE 28540 919 353-511
U OF HONG KONG

NEUROLOGY

MAIER, RUDOLPH J. N
227 MEMORIAL DR. 63 64 0
JACKSONVILLE 28546 919 353-362
LOYOLA U

MUTHER, ELLIS F. N /P
227 MEMORIAL DR. 60 60 6
JACKSONVILLE 28546
TULANE U

NEUROLOGICAL SURGERY

WILFONG, ROBERT F. NS
231 MEMORIAL DR. 67 00 0
JACKSONVILLE 28546
DUKE

OBSTETRICS AND GYNECOLOGY

ALVARADO, TERESA LOIS OBG AC
200 MEMORIAL DR. 81 83 8
JACKSONVILLE 28546 919 353-211
U OF MONTERREY

67. ONSLOW COMPONENT SOCIETY (Continued)

ARNES, MAJOR RUSSELL, JR. OBG /GP AC 48 49 55
200 MEMORIAL DR.
JACKSONVILLE 28546 919 353-0759
BOWMAN GRAY

UFFONG, ERIC ARNOLD OBG /END AC 77 79 85
1703 COUNTRY CLUB RD.,STE.203
JACKSONVILLE 28540 919 346-2182
HOWARD U

RIST, TAKEY OBG AC 65 65 71
200 MEMORIAL DRIVE
JACKSONVILLE 28546 919 353-2115
U OF NC

EYTON, JOHN WESLEY, JR. OBG AC 56 56 78
124 MEMORIAL DRIVE
JACKSONVILLE 28540 919 353-7741
U OF NC

DWARDS, TIMOTHY FREEMAN OBG AC 78 78 83
245 MEMORIAL DR.
JACKSONVILLE 28540 919 353-4333
BOWMAN GRAY

AINES, GARY LEE OBG AC 77 80 89
1703 COUNTRY CLUB RD., STE.203
JACKSONVILLE 28540 919 346-2182
HOWARD U

AMBRIGHT, WESLEY F. OBG AC 82 83 87
245 MEMORIAL DR.
JACKSONVILLE 28540 919 353-4333
DUKE

AYE, HENRY SOLOMON OBG AC 79 80 86
PO BOX 1229
JACKSONVILLE 28541 919 346-2182
U OF WEST INDIES

EEKHOF, MARK J. OBG AC 84 85 90
245 MEMORIAL DR.
JACKSONVILLE 28540 919 353-4333
U OF MICHIGAN

'NEIL, H. WILLIAM OBG AC 58 85 86
200 MEMORIAL DR.
JACKSONVILLE 28546 919 353-2115
DALHOUSIE U

VILLIAMS, PAUL FRANKLIN OBG AC 65 66 74
200 MEMORIAL DRIVE
JACKSONVILLE 28546 919 353-2115
U OF LOUISVILLE

CCUPATIONAL MEDICINE

REDEL, ERNST KARL WILHELM OM /PH AC 49 62 85
U.S. NAVAL HOSPITAL
BOX 8, MCB
CAMP LEJEUNE 28542 919 451-2181
LANDES U.MUNSTER

PHTHALMOLOGY

OBB, GREGORY WAYNE OPH AC 73 77 81
264 MEMORIAL DRIVE
JACKSONVILLE 28546 919 353-1030
VANDERBILT U

OHNSTON, CAROL ANN OPH AC 86 87 90
264 MEMORIAL DR.
JACKSONVILLE 28540 919 353-1030
U OF ROCHESTER

VILSHIRE, LARRY BRENT OPH AC 74 79 84
825 GUM BRANCH RD., STE. 135
JACKSONVILLE 28540 919 346-2444
WEST VA U

ORTHOPEDIC SURGERY

DIFIORE, RALPH J. ORS AC 68 69 87
200 DOCTORS DR. STE. J
JACKSONVILLE 28540 919 353-1412
MED COLL OF GA

GROSS, JEFFREY LOUIS ORS AC 72 72 80
128 MEMORIAL DRIVE
JACKSONVILLE 28540 919 353-4500
OHIO STATE U

ROGERS, NOEL BRUCE ORS AC 67 69 74
128 MEMORIAL DRIVE
JACKSONVILLE 28540 919 353-4500
GEORGETOWN U

VENTERS, WAYNE BURNETTE ORS AC 64 64 73
200 DOCTOR'S DRIVE, SUITE J
JACKSONVILLE 28540 919 353-1412
U OF NC

OTOLARYNGOLOGY

GREGORY, HUGH STANLEY OTO AC 64 64 73
411 WESTERN BLVD., STE. A
JACKSONVILLE 28540 919 455-4847
U OF NC

PSYCHIATRY

COLLIGAN, JOSEPH FRANCIS P /CHP AC 58 59 84
1703 COUNTRY CLUB
JACKSONVILLE 28546 919 353-4165
LOYOLA U

CUMMINS, LARRY E. P /CHP AC 61 65 88
192 VILLAGE DR.
JACKSONVILLE 28540 919 353-4165
INDIANA U

HARRIS, MICHAEL ALAN P AC 62 62 84
PO BOX 3120, CRS
JOHNSON CITY, TN 37602
U OF TENNESSEE

KEARNEY, THOMAS RAYMOND P /ALD AC 54 53 85
107-A POINT EMERALD VILLAS 919 455-5500
EMERALD ISLE 28557
NAT U OF IRELAND

PATLAK, ERWIN M. P /EM AC 52 53 85
807 SHADOWRIDGE RD. 919 328-0589
JACKSONVILLE 28540
U OF ILLINOIS

PEDIATRICS

ECKSTEIN, WILLIAM LAURENCE PD AC 81 81 91
118-C MEMORIAL DR. 919 577-5199
JACKSONVILLE 28546
RUSH MED COLL

GANT, JAMES CURTIS PD AC 83 83 88
118-C MEMORIAL DR. 919 335-6262
JACKSONVILLE 28546
U OF TEXAS

MARTIN, CHARLES R. PD AC 63 63 69
120 MEMORIAL DRIVE 919 353-0581
JACKSONVILLE 28540
DUKE

TSE, ALEX YU CHOW PD /A AC 71 74 75
120 MEMORIAL DRIVE 919 353-0581
JACKSONVILLE 28540
U OF HONG KONG

VERELL, KAREN LEA PD /ADL AC 78 78 84
12 OFFICE PARK DR. 919 353-6262
JACKSONVILLE 28540
U OF MISSISSIPPI

PATHOLOGY, ANATOMICAL AND CLINICAL

GABLE, WALTER DELAY PTH /FOP AC 54 54 74
ONSLOW MEMORIAL HOSPITAL 919 353-7803
JACKSONVILLE 28540
U OF MARYLAND

GARRETT, CHARLES LEROY, JR. PTH/FOP AC 66 66 76
ONSLOW MEMORIAL HOSPITAL 919 353-3498
JACKSONVILLE 28541
MED U OF SC

PULMONARY DISEASES

WOLANSKI, TERRENCE PHILIP PUD /IM AC 76 76 83
296 DOCTORS DR. 919 353-1811
JACKSONVILLE 28546
U OF VIRGINIA

RADIOLOGY

KAPLAN, JEFFREY MARK R AC 70 71 84
ONSLOW MEMORIAL HOSPITAL
P. O. BOX 1358
JACKSONVILLE 28541 919 577-2345
NEW YORK MED COL

MOORE, THOMAS PHILLIP R AC 55 55 64
ONSLOW MEMORIAL HOSPITAL 919 577-2274
JACKSONVILLE 28540
U OF NC

OLSON, CRAIG B. R AC 79 84 88
860 MILL RIVER RD. 919 353-5090
JACKSONVILLE 28540
AUTONOMA UNIV

THORACIC SURGERY

ASHFORD, CHARLES H., JR. TS /VS 62 62 00
111 BERNHURST RD. 919 637-4093
NEW BERN 28560
JOHNS HOPKINS

UROLOGICAL SURGERY

HAMMOCK, RONALD MACK U AC 77 79 83
200 DOCTOR'S DR. SUITE C 919 353-9994
JACKSONVILLE 28546
U OF MICHIGAN

KEYES, BOOKER T., JR. U AC 76 76 90
118-A MEMORIAL DR. 919 577-5161
JACKSONVILLE 28540
INDIANA U

VASCULAR SURGERY

BELL, WILLIAM H., III VS /TS 80 81 78
800 HOSPITAL DR. 919 638-8118
NEW BERN 28560
DUKE

70. PASQUOTANK-CAMDEN-CURRITUCK-DARE COMPONENT SOCIETY

OFFICERS—**President:** James Wilkinson, M.D., #2 Jupiter Trail, Kitty Hawk 27949 (919 261-4187)
Secretary: Brian McDowell, M.D., PO Box 2148, Manteo 27954 (919 473-2500)

NESTHESIOLOGY

BROWN, CHARLES CALVIN AN AC 84 86 89
211 ROUNDTREE DR. 919 338-1542
ELIZABETH CITY 27909
DOWNSTATE ME CTR

COOK, JOHN EDMUND AN AC 78 78 83
PO BOX 96 919 338-1542
CAMDEN 27921
M C OF WISCONSIN

DIAGNOSTIC RADIOLOGY

BROOKS, MICHAEL ANTHONY DR AC 84 86 89
106 S. WATER ST. 919 338-1193
ELIZABETH CITY 27909
CHICAGO MED SCH

70. PASQUOTANK-CAMDEN-CURRITUCK-DARE COMPONENT SOCIETY (Continued)

GRAHAM, JOHN CALHOUN, JR. DR /NM AC
106 S. WATER ST. 61 61 70
PO BOX 250
ELIZABETH CITY 27909 919 335-2652
U OF NC

EMERGENCY MEDICINE

BOUNOUS, JUDITH FRANCES EM /PD AC
2082 RIVERSHORE ROAD 70 70 84
ELIZABETH CITY 27909 919 335-1003
BOWMAN GRAY

FAMILY PRACTICE

BLAIR, JAMES SEABORN FP R
PO BOX 629 87 00 90
HATTERAS 27943 919 986-2352
EAST CAROLINA U

CARMACK, KEITH K.K. FP AC
4716 N. CROATAN HIGHWAY 83 84 87
KITTY HAWK MED. CTR.
KITTY HAWK 27949 919 261-3848
U OF HAWAII

DELIGIO, JAMES J. FP /HYP AC
4716 CROATAN HIGHWAY 74 86 87
KITTY HAWK 27949 919 261-3848
NEW YORK MED COL

HAND, LEROY CORBETT, JR. FP /EM L/RT
104 HAVENWOOD DRIVE 50 50 51
CAMDEN 27921 919 335-0531
BOWMAN GRAY

HOGGARD, WILLIAM ALDEN, JR. FP L
PO BOX 726 44 44 47
110 S. POOL ST.
ELIZABETH CITY 27909 919 335-0867
BOWMAN GRAY

HOLTON, WALTER LEGGETT FP AC
NORTH MAIN HIGHWAY 73 74 75
PO BOX 1045
MANTEO 27954 919 473-3478
DUKE

HOWELL, LEE ELMA, JR. FP AC
17 PALMETTO LANE 77 80 89
KITTY HAWK 27949 919 491-8177
U OF MISSISSIPPI

KASTNER, ROBERT JEFFREY FP /EM AC
48 DUCK WOODS DR. 81 82 86
KITTY HAWK 27949 919 261-4645
EASTERN VA

POSTON, ROBERT LEWIS FP AC
1142 N. ROAD STREET 57 57 62
ELIZABETH CITY 27909 919 338-4117
DUKE

ROMM, WILLIAM HENRY FP L/RT
PO BOX 232 50 51 52
CURRITUCK 27929 919 232-3387
U OF VIRGINIA

GENERAL PRACTICE

HARVEY, WALLACE WATSON, JR. GP /AM AC
312 NORTH ST. 54 54 57
PORTSMOUTH, VA 23704 804 399-4216
DUKE

THOMAS, WILLIAM RALPH GP L/RT
1801 DARSAN DR. 49 53 53
ELIZABETH CITY 27909 919 338-2480
CASE WESTERN RES

GENERAL SURGERY

CRUTCHLEY, WILLIAM F., JR. GS AC
1134 N. ROAD STREET 59 66 67
ELIZABETH CITY 27909 919 338-3909
MED COLL OF VA

JENKINS, SAMUEL GATLIN, JR. GS AC
1142 N. ROAD STREET 55 55 63
ELIZABETH CITY 27909 919 335-4890
U OF NC

OWENS, ZACK DOXEY GS /GYN L/RT
P. O. BOX 422 30 30 40
ELIZABETH CITY 27909 919 335-4492
U OF MARYLAND

OBSTETRICS AND GYNECOLOGY

PETERS, WILLIAM ANTHONY,JR. GYN L
P. O. BOX 392 43 44 44
ELIZABETH CITY 27909 919 335-2355
DUKE

INTERNAL MEDICINE

BARBER, ALFRED JOSEPH IM /HEM AC
1134 N. ROAD STREET 76 77 77
ELIZABETH CITY 27909 919 338-5183
GEORGETOWN U

DENUNZIO, NEIL L. IM AC
PO BOX 9 82 82 86
WINFALL 27985 919 426-9172
JEFFERSON

HEYDER, ALBRECHT MARK IM /PUD C
1142 N. ROAD ST. 85 86 90
ELIZABETH CITY 27909 919 331-1506
EASTERN VA

HUNSBERGER, KURT LEE IM AC
1142 N. ROAD STREET 69 69 78
ELIZABETH CITY 27909 919 338-4117
NORTHWESTERN U

POWELL, ROBERT NARROWAY IM AC
1142 N. ROAD STREET 70 70 75
ELIZABETH CITY 27909 919 338-4117
BOWMAN GRAY

SPAETH, WALTER IM L/RT
1904 RIVERSHORE ROAD 43 47 50
ELIZABETH CITY 27909 919 335-7389
DUKE

TOLSON, ROGER JOHN IM AC
1134 N. ROAD STREET 57 74 75
ELIZABETH CITY 27909 919 335-2963
U OF LONDON

WITWER, TIMOTHY SLAYTON IM /FP AC
1207 N. ROAD ST. 71 71 82
ELIZABETH CITY 27909 919 335-4351
BOSTON U

NEPHROLOGY

BRANDSPIGEL, KARL NEP /IM AC
104 W. COLONIAL AVE. 75 78 82
ELIZABETH CITY 27909 919 335-1083
U OF CALIFORNIA

OBSTETRICS AND GYNECOLOGY

BAILEY, CLAUDE FLETCHER OBG L/RT
403 E. FEARING ST. 45 45 48
ELIZABETH CITY 27909
U OF MARYLAND

KIZEN, PAUL ANDREW OBG AC
1141 N. ROAD STREET 77 78 84
ELIZABETH CITY 27909 919 335-2061
U OF WISCONSIN

MCDANIEL, EUGENE MARVIN, JR. OBG AC
1141 N. ROAD ST. 62 62 82
ELIZABETH CITY 27909 919 338-0101
MED COLL OF VA

MONCLA, ALFRED MARIE OBG AC
1134 N. ROAD STREET 64 64 72
ELIZABETH CITY 27909 919 338-2151
LA STATE U

RAWLS, WILLIAM CLEATON, JR. OBG AC
1134 N. ROAD ST. 66 85 72
ELIZABETH CITY 27909 919 338-2151
U OF NC

OPHTHALMOLOGY

GILBERT, MICHAEL T. OPH A
1134 N. ROAD STREET 67 68
ELIZABETH CITY 27909 919 338-01
NEW YORK MED COL

REDDING, MARSHALL SIMMS OPH A
1142 N. ROAD ST. 66 66
PO BOX 1402
ELIZABETH CITY 27909 919 335-54
DUKE

ORTHOPEDIC SURGERY

WATSON, JAMES MORRIS ORS A
1134 N. ROAD STREET 67 68
ELIZABETH CITY 27909 919 338-39
U OF MICHIGAN

OTOLARYNGOLOGY

CRUTCHFIELD, WILLIAM MONROE OTO/PS A
1134 N. ROAD STREET 66 66
ELIZABETH CITY 27909 919 335-29
U OF NC

PEDIATRICS

BEALS, MARTIN FEARING, JR. PD A
1142 N. ROAD ST. 76 76
ELIZABETH CITY 27909 919 338-21
U OF NC

HARRELL, WILLIAM FLETCHER, JR. PD L/R
1142 N. ROAD ST. 43 47
ELIZABETH CITY 27909 919 338-63
U OF VIRGINIA

HUDSON, SARAH TILTON WILLCOX PD A
1142 N. ROAD ST. 82 85
ELIZABETH CITY 27909 919 353-62
U OF NC

PUBLIC HEALTH

SLEDGE, JOHN BURTON, JR. PH A
P. O. BOX 610 55 55
KILL DEVIL HILLS 27948 919 441-61
DUKE

PATHOLOGY, ANATOMICAL AND CLINICAL

PICKREL, JERRY CLINE PTH A
P. O. DRAWER 403 58 59
ELIZABETH CITY 27909 919 335-225
TULANE U

ROBERTSON, JOSEPH LETCHER,JR. PTH A
NORTH ROAD ST. 75 75
ELIZABETH CITY 27909 919 335-225
BAYLOR

RADIOLOGY

RUSSELL, WILLIAM MICHAEL R /NM A
P. O. BOX 250 69 70
ELIZABETH CITY 27909 919 335-053
NAT U OF IRELAND

RHEUMATOLOGY

FOX, EARL RUSSELL RHU /IM A
1515 JEFFERSON-DAVIS HIGHWAY 53 54
APT. 517
ARLINGTON, VA 22202 609 884-639
MED COLL OF VA

UROLOGICAL SURGERY

EADIE, EDWARD B., JR. U A
1134 N. ROAD STREET 67 67
ELIZABETH CITY 27909 919 338-414
U OF VIRGINIA

73. PERSON COMPONENT SOCIETY

FFICERS—**President:** George W. Gentry, M.D., P.O. Box 1038, Roxboro 27573 (919 599-1131)
Secretary: Andres T. Melero, M.D., P.O. Box 28, Roxboro 27573 (919 599-2953)

MILY PRACTICE

INSLOW, JAMES ELBERT FP AC
609 PROFESSIONAL DR. 70 70 76
ROXBORO 27573 919 599-9258
U OF NC

NERAL PRACTICE

RADSHER, JAMES DONALD GP L/RT
P. O. BOX 168 45 45 50
ROXBORO 27573 919 599-1611
BOWMAN GRAY

FITZGERALD, ROBERT GREESON GP L/RT
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ROXBORO 27573 919 599-1131
U OF MARYLAND

GENERAL SURGERY

MELERO, ANDRES TARCISIO GS /TS AC
P. O. BOX 28 51 54 59
ROXBORO 27573 919 599-2953
DUKE

INTERNAL MEDICINE

LONG, STEPHEN N. IM AC
PO BOX 1058 84 86 87
ROXBORO 27573 919 599-3212
BOWMAN GRAY

LONG, THOMAS DRUMWRIGHT IM AC
PO BOX 1058 52 52 56
ROXBORO 27573 919 599-3212
BOWMAN GRAY

RADIOLOGY

MONSON, DONALD MALVIN R AC
PO BOX 309 55 62 62
ROXBORO 27573 919 597-9101
U OF WISCONSIN

74. PITT COMPONENT SOCIETY

FFICERS—**President:** Thomas G. Irons, M.D., ECU, Deans Office AD 55, Greenville 27858 (919 551-2983)
Secretary: Pamela A. Pappas, M.D., ECU, Dept. of Psy., Greenville 27858 (919 551-2404)
Executive Administrator: Kathleen M. Whalen, P.O. Box 2216, 1705 W. 6th Street, Greenville 27836 (919 758-8833)

SPECIALTY LISTED

DAMS, ROBIN DENISE S
APT. L-2 DOCTORS PARK APTS. 92 89
GREENVILLE 27834 919 758-1854
EAST CAROLINA U

GNER, DAVID MARSHAL S
APT. C-2 DOCTORS PARK APTS. 94 90
GREENVILLE 27834 919 830-1334
EAST CAROLINA U

RENSMAN, TODD ALLEN S
M-6 DOCTOR'S PARK APTS. 92 88
GREENVILLE 27834 919 752-9029
EAST CAROLINA U

RTHUR, BARTON STEVENSON S
M-9 DOCTOR'S PARK APT. 93 89
GREENVILLE 27834 919 758-7862
EAST CAROLINA U

AILEY, CHASSE MARGOT S
P-6 DOCTOR'S PARK APTS. 93 89
BEASLEY DR.
GREENVILLE 27834 919 830-9448
EAST CAROLINA U

ANKS, JERRY B., II S
2901-F CEDAR CREEK RD. 92 88
GREENVILLE 27834 919 830-9240
EAST CAROLINA U

ARNETT, STEWART D. S
217 E. WOODSTOCK DR. 91 87
GREENVILLE 27834 919 752-6717
EAST CAROLINA U

ARRETT, LINDA LUCILLE S
1313 TREYBROOKE CIR. 94 90
GREENVILLE 27834 919 752-4742
EAST CAROLINA U

EAMER, MARK EDWARD S
119 FLETCHER PL. 91 86
GREENVILLE 27834 919 758-2290
EAST CAROLINA U

OGARD, PHYLLIS JEANETTE R
1440 TREYBROOKE CIRCLE 84 85 90
GREENVILLE 27834 919 551-5912
U OF CINCINNATI

OWMAN, WILLIAM KELLY S
104-1S CHESTERFIELD CT. 93 91
GREENVILLE 27834 919 355-1122
EAST CAROLINA U

RADLEY, TERESA KELLER S
WEDGEWOOD ARMS APTS. 304 94 90
GREENVILLE 27834 919 756-2534
EAST CAROLINA U

RINKMAN, LINDA EVES R
10 PALMETTO PLACE 87 88 85
GREENVILLE 27858 919 355-6121
EAST CAROLINA U

BROOKS, CONNIE LYNN S
1135 TREYBROOKE CIR. 93 89
GREENVILLE 27834 919 830-6842
EAST CAROLINA U

BROWN, ROBERT LEE S
202 SHILOH DR. #A 92 88
GREENVILLE 27834 919 355-3223
EAST CAROLINA U

BROWNE, GEOFFREY H. S
1600 LONGWOOD DR. 91 87
GREENVILLE 27858 919 355-7607
EAST CAROLINA U

BUCH, HAL NATHAN S
127 TABER AVE. 90 89
PROVIDENCE, RI 02906
EAST CAROLINA U

BULLARD, TERESA S
EVANS MHP, BOX #7 92 89
WINTERVILLE 28590 919 355-0220
EAST CAROLINA U

BUNDY, ROBERT FRANCIS, JR. S
3215 SUMMER PL., APT. #17 93 90
GREENVILLE 27834 919 355-8733
EAST CAROLINA U

BUSH, JEFFREY SULLIVAN S
800 HEATH ST. #19 93 90
GREENVILLE 27834 919 757-0729
EAST CAROLINA U

BYRD, VERNON DALE S
2643 MULBERRY LANE. 90 86
ARLINGTON SQUARE APTS.
GREENVILLE 27858 919 551-1812
EAST CAROLINA U

BYRD, VICKI MARIE S
RT. #1, BOX 268-C 94 90
DEEP RUN 28525 919 523-5865
EAST CAROLINA U

CALL, KENNETH D. S
110 FOX RUN CIR. 91 87
GREENVILLE 27858 919 752-1732
EAST CAROLINA U

CANNON, MICHAEL L. S
330 LINDSAY DR., APT. #1 92 88
GREENVILLE 27834 919 355-5492
EAST CAROLINA U

CARTER, CHRISTINE GAIL S
RT. #14, BOX 139-C 92 88
GREENVILLE 27834 919 758-4471
EAST CAROLINA U

CLARK, CHARLES E. S
301 HOUNDS TOOTH CT. 92 89
WINTERVILLE 28590 919 752-1887
EAST CAROLINA U

CLARK, HENRY VONDELL S
330 LINDSAY DR. #9-G 93 89
GREENVILLE 27834 919 355-7133
EAST CAROLINA U

CLARK, WILLIAM DOUGLAS S
106 SCALES PL, APT. B-1 92 88
GREENVILLE 27834 919 355-5126
EAST CAROLINA U

CODY, EDMUND JOSEPH S
E-8 DOCTORS PARK APTS. 93 89
GREENVILLE 27834 919 782-1215
EAST CAROLINA U

COHEN, DANIEL MICHAEL AC
ECU SCHOOL OF MED. 75 77 91
GREENVILLE 27858 919 551-4822
U OF WITWATERSRAND

COSTNER, JAMES M. S
113 E. 12TH ST. 91 87
GREENVILLE 27834 919 757-3217
EAST CAROLINA U

COTTEN, AARON RODNEY S
108-B CEDAR CT. 92 86
GREENVILLE 27858 919 757-0571
EAST CAROLINA U

CRAFT, PATRICK P. S
124 N. EASTERN ST. 92 88
GREENVILLE 27858 919 830-3974
EAST CAROLINA U

CURTIS, KAREN ELIZABETH S
I-3 DOCTORS PARK APTS. 94 90
GREENVILLE 27834 919 758-6480
EAST CAROLINA U

DATTILO, JEFFERY S
208 E. 10TH ST. 93 89
WASHINGTON 27889 919 975-6851
EAST CAROLINA U

DAVIS, ALONZO JAMES, IV S
RT. #2, BOX 669 93 89
GREENVILLE 27858 919 355-2783
EAST CAROLINA U

DEES, JANET LEE S
J7 DOCTORS PARK APTS. 92 88
BEASLEY DR.
GREENVILLE 27834 919 752-2497
EAST CAROLINA U

DONALDSON, D. SCOTT S
102 SARA LANE #B 92 89
GREENVILLE 27834 919 758-4695
EAST CAROLINA U

DUDLEY, BARBARA MARIE S
1226 TREYBROOKE CIR. 93 89
GREENVILLE 27834 919 758-7006
EAST CAROLINA U

74. PITT COMPONENT SOCIETY (Continued)

DYMOND, JOHN BOOTH, JR. S
40 COUNTRY CLUB DR. 94 90
GREENVILLE 27834 919 355-3178
EAST CAROLINA U

EASTMAN, WILLIAM JOSEPH, JR. S
1311 TREYBROOKE CIR. 93 89
GREENVILLE 27834 919 830-6983
EAST CAROLINA U

ERVIN, MICHAEL LYNN S
330 LINDSAY DR. #4G 92 88
GREENVILLE 27834 919 355-1056
EAST CAROLINA U

FAGUNDUS, DUNCAN MCLEOD R
210 N. EASTERN ST. 88 00 85
GREENVILLE 27858 919 758-3395
EAST CAROLINA U

FAIRCLOTH, WILLIAM JOSEPH S
97 BAYSWATER RD. 93 89
WINTERVILLE 28590 919 355-0524
EAST CAROLINA U

FINCH, MICHAEL ALAN S
3206 BRASSWOOD CT. #4 94 90
GREENVILLE 27834
EAST CAROLINA U

FINLEY, CHARLES DAVID S
1-B GREENRIDGE APTS. 92 89
GREENVILLE 27834 919 752-7129
EAST CAROLINA U

GARCIA, FRANK GEORGE S
119 FOX CHASE LANE 93 89
WINTERVILLE 28590 919 321-1679
EAST CAROLINA U

GARDNER, MICHELLE WILSON S
112 HUNTINGRIDGE RD. 93 90
GREENVILLE 27834 919 758-3682
EAST CAROLINA U

GARDNER, VERNON T.A., III S
112 HUNTINGRIDGE RD. 93 90
GREENVILLE 27834 919 758-3682
EAST CAROLINA U

GIBSON, LEONARD HOWARD, JR. S
RT. #8, BOX 329-6 93 90
GREENVILLE 27834 919 830-4875
EAST CAROLINA U

GODWIN, GWENDOLYN R. S
PO BOX 700 91 87
WINTERVILLE 28590 919 756-0823
EAST CAROLINA U

GRAHAM, CARLA C. S
1012-A WESTOVER DR. 91 88
GREENVILLE 27834 919 752-2972
EAST CAROLINA U

GRAVELLE-CAMELO, SHERYL S
2409 E. THIRD ST. 91 87
GREENVILLE 27858 919 830-3751
EAST CAROLINA U

GREAVES, PAULA CECILIA S
103 SHILOH DR. #3 93 89
GREENVILLE 27834 919 756-9819
EAST CAROLINA U

GRIFFIN, STEPHANIE D. R
112 TEAKWOOD DR. 90 00 86
GREENVILLE 27834 919 537-4611
EAST CAROLINA U

HADI, HAMID A. AC
ECU SCHOOL OF MEDICINE 64 65 88
DEPT. OF OB/GYN
GREENVILLE 27858 919 551-4662
KABUL UNIV

HAHN, PAULETTE C. S
404 ROTARY AVE. 92 88
GREENVILLE 27858 919 758-1727
EAST CAROLINA U

HAMAD, SABAH S
128 STEEPLECHASE RD. 92 88
ROCKY MOUNT 27804 919 937-4451
EAST CAROLINA U

HARRIS, JAMES TODD S
APT. B-4, DOCTOR'S PARK 93 89
GREENVILLE 27834 919 830-6868
EAST CAROLINA U

HENDERSON, CATHY LYNN S
DOCTORS PARK APTS. #L-14 91 86
GREENVILLE 27834 919 758-2124
EAST CAROLINA U

HILL, SAMUEL CRAWFORD, IV S
M-4 DOCTOR'S PARK 92 89
GREENVILLE 27834 919 830-9389
EAST CAROLINA U

HOBART, FRANK ADAMS S
M-4 DOCTORS PARK APT. 92 89
GREENVILLE 27834 919 830-9389
EAST CAROLINA U

HOLLAND, AMY JEANETTE S
111 RODNEY RD. 91 87
GREENVILLE 27834 919 758-9933
EAST CAROLINA U

HOWELL, TEMPLE SHARITA S
140 CONCORD DR., APT. #8 93 90
GREENVILLE 27834 919 355-1656
EAST CAROLINA U

HUDSON, ANITA MARIA S
20-B COURTNEY SQUARE 92 89
GREENVILLE 27858 919 355-3265
EAST CAROLINA U

HUFFMON, GEO. VANBUREN,III S
407 S. LEE ST. 92 88
AYDEN 28513 919 758-7604
EAST CAROLINA U

HUGHES, C. ANTHONY S
120-A HUNTINGRIDGE RD. 91 87
GREENVILLE 27834 919 752-6434
EAST CAROLINA U

IMBODEN, LEY INEZ S
217 E. WOODSTOCK DR. 91 86
GREENVILLE 27834 919 756-8735
EAST CAROLINA U

INGE, JACK RANSOM, II S
N-5 DOCTOR'S PARK APTS. 93 89
GREENVILLE 27834 919 830-1738
EAST CAROLINA U

ISKANDER, NIVEEN YOUSSEF S
3336 LANDMARK ST. H-3 92 89
GREENVILLE 27834 919 355-3248
EAST CAROLINA U

JESTER, KIMBERLY BUCHANAN S
9 BRANCHS ESTATES MH PARK 92 89
BRANCHES ESTATES, 10-B
GREENVILLE 27858 919 355-0961
EAST CAROLINA U

JOHNSON, THOMAS DUANE S
9538 W. NORTH AVE. APT. #1 90 86
WAUWATOSA, WI 53226 919 758-4458
EAST CAROLINA U

JOHNSTONE, WILLIAM MILLER, JR. R
1608 BEAUMONT DR. 89 90 85
GREENVILLE 27858 919 551-4669
EAST CAROLINA U

JONES, ELLEN HUFFMAN S
1410 GREENBRIAR VILLAGE 94 90
AYDEN 28513 919 746-2245
EAST CAROLINA U

KRAMER, R. KEITH S
102 HUNTINGRIDGE ROAD 93 89
GREENVILLE 27834 919 830-9278
EAST CAROLINA U

KREMER, WM. ALFRED S
208 N. EASTERN ST. 91 87
GREENVILLE 27858 919 830-1885
EAST CAROLINA U

LAKIN, KAREN LUM S
322 LINDSAY DR. #5-D 93 89
GREENVILLE 27834 919 756-2989
EAST CAROLINA U

LANGNER, JULIETTE PARTHENAY S
2410 E. THIRD ST., APT. A 94 90
GREENVILLE 27858
EAST CAROLINA U

LASSALETTA, MARGARITA M. S
203 SHILOH DR. #B 92 89
GREENVILLE 27834 919 355-5897
EAST CAROLINA U

LAVIGNE, MARK KINO S
16 MELSTONE TURN 90 86
DURHAM 27707 919 758-1822
EAST CAROLINA U

LEONHARDT, GARY GENE R
114 HEMLOCK DR. 89 00 85
GREENVILLE 27858 919 551-4100
EAST CAROLINA U

LJUNG, MARTHA LEE S
1121 TREYBROOKE CIR. 90 86
GREENVILLE 27834 919 830-380
EAST CAROLINA U

LONDON, DEBORAH LOUISE S
RT. #2, BOX 561-D 91 86
AYDEN 28513 919 752-010
EAST CAROLINA U

LOWRY, BRIAN PATRICK S
3206 BRASSWOOD CT. APT. #3 94 90
GREENVILLE 27834 919 355-177
EAST CAROLINA U

MAHMUD, REHAN AC
DEPT. OF CARDIOLOGY 75 80 88
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-539
KING EDWARD COLL

MANGUM, SARAH ROSE S
203 GARNER RD. 91 87
GREENVILLE 27834 919 756-575
EAST CAROLINA U

MANRING, ERIK ALEXANDER S
1535 TREYBROOKE CIR. 94 90
GREENVILLE 27834 919 830-406
EAST CAROLINA U

MARTIN, ANN MICHELE S
103 ADAMS BLVD. 93 89
GREENVILLE 27858 919 830-391
EAST CAROLINA U

MCALLISTER, VINCENT S
BOX 46, DAVID DR. 93 89
BRANCH'S ESTATES
GREENVILLE 27858 919 756-247
EAST CAROLINA U

MESSER, BERNIECE REDMOND S
110 MARTHA LOOP 93 90
FARMVILLE 27828 919 753-567
EAST CAROLINA U

MOHEREK, ROBIN MARIE S
329 LINDSAY DR. #5-I 92 88
GREENVILLE 27834 919 355-871
EAST CAROLINA U

MONTEITH, LINDA GAIL S
DOCTORS PARK APTS. L14 91 87
GREENVILLE 27834 919 758-212
EAST CAROLINA U

MOORE, CAROL ANN R
106 SCALES PL. #M-5 88 00 85
GREENVILLE 27834 919 753-201
EAST CAROLINA U

MOOSE, NANCY ELIZABETH S
121 HUNTINGRIDGE RD. 93 89
GREENVILLE 27834 919 830-517
EAST CAROLINA U

NELSON, VICKIE LYNN S
803 PEED DR., APT. 14 93 89
GREENVILLE 27834 919 355-606
EAST CAROLINA U

OAKLEY, WM. ENNIS, JR. S
304 SYCAMORE BRANCHES CLOSE 92 88
WINTERVILLE 28590 919 355-470
EAST CAROLINA U

OWENS, SUSAN LEIGH S
APT. S-5 DOCTOR'S PARK 94 90
GREENVILLE 27834 919 830-544
EAST CAROLINA U

PARK, HYUNSOON EDIE S
2002 RANDOM DR. 94 90
GREENSBORO 27407 919 292-236
EAST CAROLINA U

PARKS, WILLIAM B., III S
1916 SAM RITTENBERG BLVD. #104 90 86
CHARLESTON, SC 29407 919 355-574
EAST CAROLINA U

PATE, DORIS CATHERINE S
MEDICAL OAKS APTS. #C-2 91 86
GREENVILLE 27834 919 757-351
EAST CAROLINA U

PAUL, JOSEPH W., JR. S
309 E. THIRD ST. 92 88
AYDEN 28513 919 746-477
EAST CAROLINA U

PEARLMAN, WM. GLENN S
RT. #1, BOX 54-A 91 87
GREENVILLE 27834
EAST CAROLINA U

74. PITT COMPONENT SOCIETY (Continued)

PEREZ-NAVARRO, PAUL A. S
RT. #8, BOX 330-A 91 87
GREENVILLE 27834 919 757-0532
EAST CAROLINA U

PHIPPS, ERVIN LAMAR S
2013 SECOND LOOP RD. #A-5 90 85
FLORENCE, SC 29501 919 551-3379
EAST CAROLINA U

PONDER, MADELEINE S
#R-3 DOCTORS PARK APTS. 93 89
BEASLEY DR.
GREENVILLE 27834 919 830-3706
EAST CAROLINA U

PRICE, BILLY LEE, JR. S
3260 LANDMARK ST. C-6 90 86
GREENVILLE 27834 919 756-5425
EAST CAROLINA U

PUTNAM, CHERYL H. S
203 EVANSWOOD DR. 91 88
GREENVILLE 27858 919 756-9861
EAST CAROLINA U

RAY, JEFFREY ALLEN S
208 ASH ST., APT. #4 94 90
GREENVILLE 27858 919 830-6686
EAST CAROLINA U

READLING, RANDY DARENE S
1705 VINEYARD DR. N #2 92 88
WILSON 27893 919 732-9596
EAST CAROLINA U

REEVES, JULIE ANN S
1610 TREYBROOKE CIRCLE 94 90
GREENVILLE 27834 919 830-6812
EAST CAROLINA U

REIN-WARREN, KEMPER S
1717 CIRCLE DR. 93 90
GREENVILLE 27858 919 355-0734
EAST CAROLINA U

RHODES, JOHN FLINT, JR. S
J-4 DOCTOR'S PARK 93 90
GREENVILLE 27834 919 830-1646
EAST CAROLINA U

RICHARDSON, JOANN YUKI S
D-6 DOCTORS PARK APTS. 93 89
GREENVILLE 27834 919 830-9178
EAST CAROLINA U

RIERSON, LESLIE S
322 LINDSAY DR. #D-10 93 89
GREENVILLE 27834 919 765-8802
EAST CAROLINA U

ROBERTSON, CARROLL B., III S
PO BOX 8432 92 88
GREENVILLE 27835 919 758-7604
EAST CAROLINA U

RUDD, STEPHEN MILES S
2462 STANTONSBURG RD. STE. 140 91 87
GREENVILLE 27834 919 752-3758
EAST CAROLINA U

SALDANHA, CHRISTALENE S
334 LINDSAY DR. APT. 5-H 93 90
GREENVILLE 27834 919 355-3167
EAST CAROLINA U

SAWYER, BARBARA ANN S
BIRCHWOOD SANDS MOBILE HOME ESTATES, LOT #28 91 87
GREENVILLE 27834 919 758-3155
EAST CAROLINA U

SCOTT, SARA MARIE S
RT. #8, BOX 329-7 93 90
GREENVILLE 27834 919 830-4875
EAST CAROLINA U

SELF, CRAIG STEPHEN S
APT. P-3, DOCTORS PARK 94 90
BEASLEY DR.
GREENVILLE 27834 919 757-3001
EAST CAROLINA U

SHELTON, STEPHEN LEE S
3320 LANDMARK ST. C-8 91 87
GREENVILLE 27834 919 355-5027
EAST CAROLINA U

SIDES, STEPHEN N., II S
106-A VICTORIA CT. 91 87
GREENVILLE 27834 919 355-5185
EAST CAROLINA U

SIGMON, JOY ELAINA S
R-10 DOCTORS PARK APTS. 94 90
GREENVILLE 27834
EAST CAROLINA U

SIMMONS, DUNCAN RUSSELL S
#18 AZALEA GARDENS 94 90
GREENVILLE 27858 919 757-1806
EAST CAROLINA U

SINCLAIR, SHERRY LYNN S
1313 TREYBROOKE CIR. 93 89
GREENVILLE 27834 919 752-4742
EAST CAROLINA U

SINK, MARY ANNE S
329 LINDSAY DR. #I-7 93 89
GREENVILLE 27834 919 355-5141
EAST CAROLINA U

SKIPPER, ERIC RAY R
PITT COUNTY MEM. HOSP. 85 00 90
DEPT. OF SURGERY #204
GREENVILLE 27858 919 551-4629
BOWMAN GRAY

SMITH, JOHN RANDOLPH S
1925 WHITE HOLLOW DR. 93 89
GREENVILLE 27834 919 355-0427
EAST CAROLINA U

SMITH, LATESSA ANNE S
119 OAKMONT DR. 92 88
#30 LEXINGTON SQ II
GREENVILLE 27834 919 355-3286
EAST CAROLINA U

SMITH, MELANIE ROWE S
3534-B MARGUERITE LANE 94 90
WILSON 27893 919 237-9474
EAST CAROLINA U

SMITH, MICHAEL EARL R
1208 WHITEHALL ROAD 88 00 90
WINTERVILLE 28590 919 551-2404
EAST CAROLINA U

SMITH, WILLIAM THOMAS S
1230 TREYBROOK CR. 93 90
GREENVILLE 27834 919 758-0735
EAST CAROLINA U

STOUT, THOMAS F. S
2673 MULBERRY LN. 91 87
GREENVILLE 27858 919 355-5168
EAST CAROLINA U

SURFACE, LUTHER BROOKS S
P-4 DOCTORS PARK APTS. 94 90
GREENVILLE 27834 919 758-8220
EAST CAROLINA U

SUTTON, STEVEN GLENN S
107 PAUL CIRCLE 91 87
GREENVILLE 27834 919 752-2322
EAST CAROLINA U

SUVICK, MICHAEL ALFRED S
Q-2 KINGSWOOD APTS. 93 90
CHAPEL HILL 27516 919 757-0514
EAST CAROLINA U

SWANSON, PAUL JOSEPH, JR. S
E-8 DOCTOR'S PARK APTS. 93 89
BEASLEY DR.
GREENVILLE 27834 919 830-0304
EAST CAROLINA U

TALLEY, WENDY GAYLE S
3288 COLONY CT. #610 93 89
GREENVILLE 27834 919 758-6121
EAST CAROLINA U

TANNEHILL, W. BRUCE S
213 PINERIDGE DR. 91 87
GREENVILLE 27834 919 758-6973
EAST CAROLINA U

THOMAS, TERISA ANN S
RT. #16, BOX 170 94 90
GREENVILLE 27858 919 756-8892
EAST CAROLINA U

TODD, KAREN GROSSMANN S
3204 MEETING PL. 92 89
GREENVILLE 27858 919 756-7333
EAST CAROLINA U

TOLSON, TIMOTHY ALEXANDER S
28 BIRCHWOOD SANDS ESTATES 91 86
GREENVILLE 27834 919 758-3155
EAST CAROLINA U

TRIPP, ELIZABETH LOUISE S
D-8 DOCTOR'S PARK 93 89
GREENVILLE 27834 919 757-1294
EAST CAROLINA U

TWISELTON, LOUISE ANN S
1133 TREYBROOKE CIR. 91 90
GREENVILLE 27834 919 758-8996
EAST CAROLINA U

VON BIBERSTEIN, SARAH E. S
326 LINDSAY DR., APT. 9 91 89
GREENVILLE 27834 919 756-2286
EAST CAROLINA U

WALKER, WM. P., III S
3000 GOLDEN RD. #18 92 88
GREENVILLE 27858 919 830-9490
EAST CAROLINA U

WARRINGTON, LEWIS E. S
106 SCALES PL., APT. A7 92 87
GREENVILLE 27834 919 757-1911
EAST CAROLINA U

WATERS, GREGORY STIEGLER S
1802 WOODHILL TRAIL 90 89
AUGUSTA, GA 30909 919 752-6216
EAST CAROLINA U

WEHRY, MARK A. S
102 SOMERSET DR. 91 87
GREENVILLE 27834 919 752-2434
EAST CAROLINA U

WEST, THADDEUS C., III S
1113 TREYBROOKE CIRCLE 93 89
GREENVILLE 27834 919 830-0316
EAST CAROLINA U

WHITE, SEAN P. S
ROUTE #8, BOX 330-P 91 87
GREENVILLE 27834 919 757-3046
EAST CAROLINA U

WILLIAMS, JILL ANNETTE S
2608 MULBERRY LN. 94 90
ARLINGTON SQUARE APTS.
GREENVILLE 27858 919 355-8825
EAST CAROLINA U

WILLIS, LINDA LEE S
116-B N. MEADE ST. 91 87
GREENVILLE 27834 919 752-9218
EAST CAROLINA U

WILSON, EDWARD T. S
32 UNIVERSITY CONDOMINIUMS 91 88
GREENVILLE 27834 919 752-3720
EAST CAROLINA U

ALLERGY

BRESTEL, ERIC PAUL A /IM AC
DEPT. OF MEDICINE 72 73 88
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2562
U OF FLORIDA

ALLERGY & IMMUNOLOGY

FISHER, ROBERT H. AI /IM AC
DEPT. OF MED/ALLERGY 81 83 88
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2562
U OF ROCHESTER

MEGGS, WILLIAM JOEL AI /IM AC
ECU SCHOOL OF MEDICINE 79 80 88
GREENVILLE 27858 919 551-2562
U OF MIAMI

ANESTHESIOLOGY

BRIGHT, DON CLARK AN AC
1705 W. SIXTH STREET 71 71 74
GREENVILLE 27834 919 752-2140
U OF NC

MELVIN, WINSLOW BRITT AN AC
RT. #1, BOX 92-A 85 87 85
WINTERVILLE 28590 919 355-3383
EAST CAROLINA U

74. PITT COMPONENT SOCIETY (Continued)

MINARD, RAYMOND BRUCE AN AC
3608 COVENTRY CT. 81 84 78
GREENVILLE 27858 919 756-9168
EAST CAROLINA U

PLOTKIN, CHARLES NEAL AN C
1705 W. 6TH ST. 83 87 90
GREENVILLE 27834 919 752-2140
GEO WASHINGTON U

ROBB, JEFFREY WALLACE AN AC
1705 W. 6TH ST. 80 80 86
GREENVILLE 27834 919 752-2140
WAYNE STATE U

SONG, JULIET KIM AN AC
1705 W. 6TH ST. 65 65 72
GREENVILLE 27834 919 752-1433
EWHA UNIV

WARSHAUER, ALBERT DAVID AN L/RT
1608 E. FIFTH STREET 47 47 59
GREENVILLE 27858 919 752-5296
WASHINGTON U

WELCH, JACK H. AN AC
1705 W. 6TH ST. 63 63 70
GREENVILLE 27834 919 752-2140
U OF NC

WICKER, JOSEPH BEAMAN AN AC
1000 CREEK STONE TRACE 78 81 84
LEXINGTON, KY 40517 919 752-2140
U OF TENNESSEE

CARDIOVASCULAR DISEASES

BOWYER, ALLEN FRANK CD AC
2000 VENTURE TOWER DR.,STE.300 59 60 78
GREENVILLE 27834 919 551-4651
LOMA LINDA U

CARLSON, ERIC BARNETT CD /IM AC
EASTERN CARDIOLOGY, P.A. 80 83 84
SUITE 10, MED. PAVILION
GREENVILLE 27834 919 757-1000
HAHNEMANN

DEANTONIO, HARRY JAMES CD /IM AC
SECTION OF CARDIOLOGY 82 89 90
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-5395
PHIL OSTEO MC

FEARRINGTON, ERIC CD /IM AC
1800 W. 5TH ST., STE. #2 57 57 64
GREENVILLE 27834 919 752-3185
U OF NC

MOVAHED, ASSAD CD /NM AC
SECTION OF CARDIOLOGY 75 75 87
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4651
AHWAZ MED SCH

ORR, LYNN HUIE, JR. CD /IM AC
1705 W. 6TH ST. BLDG. E 74 70 80
GREENVILLE 27834 919 752-6101
BOWMAN GRAY

OSEROFF, ALLEN CD /IM AC
1705 W. 6TH ST., BLDG. E 80 89 89
GREENVILLE 27834 919 752-6101
GEO WASHINGTON U

PASPA, PHILIP ALEXANDER CD /IM AC
DEPT.MED/SECT. OF CARDIOLOGY 84 00 90
ECU SCHOOL OF MEDICINE
GREENVILLE 27858
DOWNSTATE ME CTR

PRIVETTE, DOUGLAS CRAIG CD /IM AC
326 DUPONT CR. 76 76 82
GREENVILLE 27858 919 752-6101
U OF NC

REEVES, WM. CHARLES CD AC
ECU SCHOOL OF MEDICINE 71 71 87
SECTION OF CARDIOLOGY
GREENVILLE 27858 919 757-4651
U OF TEXAS

ROGERS, GARRETT LEE CD AC
1705 W. 6TH ST., BLDG. E 73 73 89
GREENVILLE 27834 919 752-6101
U OF TX-HOUSTON

ROSE, JOHN DAVID CD /IM AC
1800 W. 5TH ST., #2 72 73 78
GREENVILLE 27834 919 752-3185
U OF PENN

THOMAS, ROSEMARY ANN CD /IM AC
2000 VENTURE TOWER DR. 76 77 83
GREENVILLE 27834 919 757-3266
U OF VIRGINIA

WHEELER, WM. STEPHEN CD /IM AC
BURROUGHS-WELLCOME 75 76 88
RESEARCH TRIANGLE PK 27709
U OF CALIF-LA

CARDIOVASCULAR SURGERY

CHITWOOD, WALTER R., JR. CDS /TS AC
ECU SCHOOL OF MEDICINE 74 83 84
CARDIAC SURG., ROOM 235
GREENVILLE 27858 919 551-4822
U OF VIRGINIA

SPENCE, PAUL ANTHONY CDS AC
ECU SCH. OF MEDICINE 80 81 88
DEPT. OF CARDIAC SURG.
GREENVILLE 27858 919 551-4822
QUEENS U

WILLIAMS, JOHN MARK CDS AC
ECU SCHOOL OF MED. 76 85 86
DEPT. OF SURGERY
GREENVILLE 27858 919 551-4822
DUKE

CHILD NEUROLOGY

SUNDER, THEODORE RALPH CHN /N AC
DEPT. OF PEDICATRICS 72 62 85
ECU SCHOOL OG MEDICINE
GREENVILLE 27858 919 551-2510
JEFFERSON

CHILD PSYCHIATRY

DANOFF, JASCHA WOLSEY CHP /P AC
DEPT. OF PSYCHIATRY 55 56 82
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2660
U OF TORONTO

DIAMOND, JOHN MICHAEL CHP /P AC
DEPT. OF PSYCHIATRY 79 80 84
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2673
HOWARD U

MEGA, LESLY TAMARIN CHP /P AC
DEPT. OF PSYCHIATRY 68 70 83
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2673
BOSTON U

CLINICAL PATHOLOGY

CATROU, PAUL GREGOIRE CLP AC
ECU SCHOOL OF MEDICINE 74 74 90
DEPT. CLI. PTH, BRODY 1S08
GREENVILLE 27858 919 551-4928
TULANE U

COLON AND RECTAL SURGERY

CARTER, FRANK MOULTON CRS /GS AC
ECU SCHOOL OF MEDICINE 84 88 90
DEPT. OF SURGERY
GREENVILLE 27858 919 551-4171
TEMPLE U

ROBERTSON, HOWARD D. CRS /GS AC
905 JOHNS HOPKINS DR. 74 75 88
GREENVILLE 27834 919 758-1747
U OF LOUISVILLE

DERMATOLOGY

BURKE, WILLIAM ALLEN D AC
502 WINSTEAD RD. 82 83 7
GREENVILLE 27834 919 551-255
EAST CAROLINA U

CROUNSE, ROBERT GRIFFITH D /PH AC
RT. #2, BOX 263-T 55 61 8
BLOUNTS CREEK 27814 919 551-203
YALE

HENDRIX, JOHN DAVID D AC
1705 W. SIXTH STREET 67 68 7
GREENVILLE 27834 919 752-412
U OF FLORIDA

JONES, BILLY ERNEST D AC
DEPT. OF MED/DERMATOLOGY 58 58 6
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-255
DUKE

SMITH, CAMERON LANGLEY D AC
1705 W. SIXTH STREET 71 71 7
GREENVILLE 27834 919 752-412
U OF NC

SMITH, MICHAEL LEE D /PD AC
210 BENT CREEK DR. 83 85 8
GREENVILLE 27834 919 551-255
EAST CAROLINA U

DIAGNOSTIC RADIOLOGY

CLARK, TIMOTHY J. DR AC
324 DUPONT CIR. 81 85 8
GREENVILLE 27858 919 551-448
DUKE

JOHNSRUDE, IRWIN STANLEY DR AC
P. O. BOX 328, RTE. #9 56 66 6
GREENVILLE 27834 919 355-692
U OF MANITOBA

POWERS, BARRY DR AC
306 STANWOOD DRIVE 75 77 81
GREENVILLE 27834 919 752-500
NEW YORK MED COL

TROUGHT, WILLIAM STANLEY DR AC
19 BAYWOOD DRIVE 68 69 75
WINTERVILLE 28590 919 752-500
TUFTS U

WEAVER, MICHAEL DAVID DR AC
EASTERN RADIOLOGISTS 71 71 76
#9 DOCTORS PARK
GREENVILLE 27834 919 830-518
U OF TENNESSEE

EMERGENCY MEDICINE

ALLISON, E. JACKSON, JR. EM AC
PROFESSOR & CHAIRMAN 75 75 73
ECU, DEPT. OF EMERGENCY MED.
GREENVILLE 27858 919 551-4757
U OF NC

BENSON, NICHOLAS HEROD EM AC
109 DUKE RD. 80 81 84
WINTERVILLE 28590 919 551-2954
U OF SOU. DAKOTA

BROWN, CHARLES KEVIN EM AC
DEPT. OF EMERGENCY MEDICINE 81 82 89
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4757
MED COLL OF VA

CAPPS, RHONDA MARIE EM R
201 COUNTRY RD. 89 90 90
GRIMESLAND 27837 919 551-4184
U OF TEXAS

CLINE, DAVID MARTIN EM AC
ECU SCHOOL OF MEDICINE 82 83 85
ASSISTANT PROFESSOR,BRODY 4W54
GREENVILLE 27858 919 551-2954
WAYNE STATE U

CLINE, KATHLEEN ANN EM AC
305 NANTUCKET CT. 82 83 85
WINTERVILLE 28590 919 321-2277
WAYNE STATE U

74. PITT COMPONENT SOCIETY (Continued)

HENGEVELD, LOFTUS, JR. EM /AN RT
107 IRON WOOD DRIVE 47 48 77
GREENVILLE 27834 919 756-2047
HAHNEMANN

HUNT, RICHARD CHARLES EM AC
ECU SCHOOL OF MEDICINE 85 85 88
DEPT. OF EMERGENCY MED.
GREENVILLE 27858 919 551-2961
EAST CAROLINA U

MITCHELL, JOYCE MARIE EM /IM AC
DEPT. OF EMERGENCY MED. 76 79 82
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4757
GEORGETOWN U

MURPHY, BARBARA ANNE EM AC
DEPT. OF EMERGENCY MED. 75 78 88
ECU SCHOOL OF MEDICINE
GREENVILLE 27858
MED COLL OF PENN

PRASAD, N. HERAMBA EM AC
DEPT. OF EMERGENCY MED. 70 74 89
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2154
M C-PONDICHERRY

RAY, V. GAIL EM AC
DEPT. OF EMERGENCY MED. 77 77 86
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4757
U OF ARKANSAS

ROLLER, JEFFERY EARL EM R
2612 CROCKETT DR. 88 90 85
GREENVILLE 27858 919 758-2524
U OF NC

SHEPHERD, SUZANNE MOORE EM AC
PITT COUNTY MEM. HOSPITAL 80 82 84
DEPT. OF EMERGENCY MED.
GREENVILLE 27858 919 551-2954
GEORGETOWN U

SKRIP, STEPHEN M. EM R
319-G ST. ANDREWS DR. 88 00 88
GREENVILLE 27834 919 355-6233
CHICAGO MED SCH

ENDOCRINOLOGY

BUTLER, PETER CAWOOD END C
ECU, BRODY 2N-72 80 80 91
GREENVILLE 27858 919 551-2767
U OF BIRMINGHAM

CARO, JOSE FRANCISCO END /IM AC
DEPT. OF ENDOCRINOLOGY 73 73 83
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2571
U OF URUGUAY

WAYS, DOUGLAS KIRK END AC
121 N. LONGMEADOW RD. 80 82 88
GREENVILLE 27834 919 551-2571
U OF NC

FORENSIC PATHOLOGY

GILLILAND, M.G.F. FOP /PTH AC
ECU SCHOOL OF MEDICINE 69 73 89
DEPT. OF CLI. PTH, BRODY 1S08
GREENVILLE 27858 919 551-4655
LOYOLA U

HARRIS, LAWRENCE STANLEY FOP /NA AC
ECU SCHOOL OF MEDICINE 62 62 78
DEPT. OF CLINICAL PATH.
GREENVILLE 27858 919 551-4655
CASE WESTERN RES

HUDSON, RICHARD PAGE, JR. FOP /PTH AC
205 W. CHURCH ST. 56 56 68
FARMVILLE 27828 919 753-7128
MED COLL OF VA

FAMILY PRACTICE

BEST, ANDREW ARTHUR FP L
P. O. BOX 949 51 53 65
GREENVILLE 27834 919 752-2129
MEHARRY MED COLL

BREMER, CHARLES CHRISTOPHER FP AC
DEPT. OF FAMILY MED. 4N78 64 64 68
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2601
DUKE

BRUCE, KAREN EMY FP AC
ECU SCHOOL OF MEDICINE 87 88 91
DEPT. OF FAMILY MEDICINE
GREENVILLE 27858 919 551-2021
U OF WASHINGTON

CARSON, JACK OLIVER FP AC
P. O. BOX 549 52 52 54
GRIFTON 28530 919 524-4463
U OF MARYLAND

CRABTREE, DANIEL WAYNE FP AC
E. CAROLINA FAM. PRAC. CTR. 73 74 88
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-5457
WAYNE STATE U

DAUGHERTY, JANICE ELAINE FP /GER AC
DEPT. OF FAM. MED. BRODY 4N-78 78 81 82
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2601
BOWMAN GRAY

DENNING, CHRISTOPHER MARSHAL FP C
ECU FAMILY PRAC. CTR. 86 87 91
GREENVILLE 27858 919 551-5457
MED COLL OF GA

DUCKETT, CHARLES HOWARD FP AC
DEPT. OF FAMILY MEDICINE 57 57 58
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2608
BOWMAN GRAY

FOWLER, WILLIAM EDWARD FP S
303 LOBLOLLY CIR. 90 85
GREENWOOD, SC 29649 803 229-4966
EAST CAROLINA U

HAGGERTY, JESSE CORNELIUS,III FP AC
ECU SCHOOL OF MEDICINE 87 88 91
DEPT. OF FAMILY MEDICINE
GREENVILLE 27858 919 551-2587
EMORY U

HEIZER, MORTIMER DANTZLER FP AC
701 N. MAIN STREET 61 61 65
FARMVILLE 27828 919 753-3193
MED COLL OF VA

IRONS, CARY FREDERICK, JR. FP L/RT
1104 W. ROCK SPRING ROAD 41 46 46
GREENVILLE 27834 919 752-3423
MED COLL OF VA

JAMES, PAUL ARTHUR FP AC
PO BOX 549 84 85 88
BETHEL 27812 919 825-0355
U OF NC

JOBE, ANN CONNOR FP AC
DEPT. OF FAMILY MEDICINE 86 87 90
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2278
U OF NEVADA

JONES, JAMES GRADY FP AC
PO BOX 8609 59 59 61
GREENVILLE 27858 919 551-2600
BOWMAN GRAY

KALLMAN, HAROLD FP /GER AC
DEPT. OF FAMILY MEDICINE 54 55 82
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2597
NEW YORK U

KING, DANA EDWIN FP AC
ECU SCHOOL OF MEDICINE 81 82 84
FAMILY PRACTICE CENTER
GREENVILLE 27858 919 551-5505
U OF KENTUCKY

KLEIN, GEORGE FP /OM AC
309 GRANVILLE DR. 79 81 84
GREENVILLE 27858 919 355-5454
AUTONOMA UNIV

KOONTZ, JACK ALEXANDER FP /OM AC
E. I. DUPONT DENEMOURS CO. 64 64 69
P. O. BOX 800
KINSTON 28501 919 522-6100
U OF NC

LYMAN, DAVID J. FP AC
DEPT. OF FAMILY MEDICINE 72 73 86
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4611
U OF MICHIGAN

MCLEAN, HARRY H., III FP /EM AC
RT. #2, BOX 52 53 53 54
WINTERVILLE 28590 919 757-6841
WASHINGTON U

PATTERSON, THOMAS HENRY, JR. FP AC
701 N. MAIN STREET 54 55 58
FARMVILLE 27828 919 753-3193
U OF NC

PATTON, DENZIL D. FP AC
DEPT. OF FAMILY MEDICINE 72 72 87
ECU FAMILY PRACTICE CTR.
GREENVILLE 27858 919 551-4616
WEST VA U

PURVIS, JOHN ROSS FP AC
ECU SCH. OF MEDICINE 77 78 88
DEPT. OF FAM. MEDICINE
GREENVILLE 27858 919 551-5452
U OF SOU FLORIDA

RAWL, RICHARD PRESTON FP AC
PO BOX 549 78 80 82
BETHEL 27812 919 825-0355
BOWMAN GRAY

RIDDLE, WILLIAM MARK FP C
ECU, DEPT. OF FAMILY MED. 85 88 88
FAMILY PRAC. CENTER
GREENVILLE 27858 919 752-4491
EAST CAROLINA U

SANCHEZ, RAFAEL CAMILO FP /ADL AS
PO BOX 20035 50 50 85
GREENVILLE 27858 919 551-2600
LA STATE U

SEHGAL, PRAGNA NINA FP /GER AC
DEPT. OF FAMILY MEDICINE 67 77 87
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2189
MAHATMA GANDHI

VERNON, MICHAEL STEPHEN FP /GER AC
DEPT. OF FAMILY MEDICINE 79 81 84
ECU SCH. OF MED. BRODY 4N-80
GREENVILLE 27858 919 551-2597
BOWMAN GRAY

WILKERSON, JACK WINFIELD FP AC
P. O. BOX 1966 53 53 56
GREENVILLE 27834 919 752-7133
MCGILL U

WILLIS, STEPHEN EDGAR FP AC
DEPT. OF FAMILY MED. 4N-78 81 82 84
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4611
U OF VIRGINIA

FORENSIC PSYCHIATRY

BERGER, BRUCE R. FPY /CHP AC
105 FAIRLANE RD. 77 78 84
GREENVILLE 27834 919 355-8777
U OF MINN

GASTROENTEROLOGY

MARCUARD, STEFANO P. GE /IM AC
DEPT. OF MEDICINE 77 79 84
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4652
U OF ZURICH

NEWTON, DOUGLAS FRISBIE GE /IM AC
1705 W. SIXTH STREET 68 72 75
GREENVILLE 27834 919 752-6101
SUNY-SYRACUSE

SINAR, DENNIS ROBERT GE /IM AC
DEPT. OF MEDICINE 73 73 82
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4652
OHIO STATE U

74. PITT COMPONENT SOCIETY (Continued)

GENERAL PRACTICE

SMITH, JAMES JEFCOAT GP L/RT
1903 BROOK ROAD 44 44 48
GREENVILLE 27834 919 756-3905
U OF TENNESSEE

GENERAL PREVENTIVE MEDICINE

DUNN, KATHLEEN ANNE GPM AC
DEPT. OF PREVENTIVE MED. 84 88 89
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2980
EAST CAROLINA U

GENERAL SURGERY

BARTLETT, STEPHEN RUSSELL GS L/RT
208 N. LONGMEADOW ROAD 43 50 50
GREENVILLE 27834 919 752-3218
DUKE

BOGEY, WILLIAM M., JR. GS /VS AC
DEPT. OF VASCULAR SURGERY 84 88 89
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4667
EAST CAROLINA U

CLARK, GEORGE THOMAS, III GS C
ECU SCHOOL OF MEDICINE 85 88 90
DEPT. OF SURGERY
GREENVILLE 27858 919 551-4667
U OF NC

CUNNINGHAM, PAUL R. G. GS AC
DEPT. OF SURGERY,BRODY BLDG. 72 72 83
ECU SCH. OF MED. ROOM 4S-10
GREENVILLE 27858 919 551-2620
U OF WEST INDIES

FOIL, MARY BETH GS AC
DEPT. OF SURGERY 81 81 81
ECU SCHOOL OF MEDICINE
GREENVILLE 27858
EAST CAROLINA U

LANNIN, DONALD ROWE GS AC
DEPT. OF SURGERY 74 76 83
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-5418
U OF MINN

LARSON, RICHARD MARTIN GS /CDS AC
905 JOHNS HOPKINS DR. 74 76 82
GREENVILLE 27834 919 758-1747
DUKE

LONGINO, FRANK HENRY GS /TS L/RT
1914 FOREST HILL DR. 47 51 56
GREENVILLE 27834 919 758-1747
DUKE

MACDONALD, KENNETH G., JR. GS /ABS AC
DEPT. OF SURGERY 81 83 89
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4171
WEST VA U

PEARSALL, DAVID W. GS AC
2315 EXECUTIVE PARK CIR. 69 70 87
GREENVILLE 27834 919 830-5392
U OF NC

PORIES, WALTER JULIUS GS /TS AC
203 CHOWAN ROAD 55 56 78
GREENVILLE 27834 919 551-4629
U OF ROCHESTER

RUCKER, WILLIAM L. GS AC
905 JOHN'S HOPKINS DR. 80 81 83
GREENVILLE 27834 919 758-1747
MED U OF SC

TIPTON, WM. WAKEFIELD GS /VS AC
905 JOHNS HOPKINS BLVD. 82 83 88
GREENVILLE 27834 919 758-1747
VANDERBILT U

WINSTEAD, JOHN LINDSAY, JR. GS AC
SUITE #1, MEDICAL PAVILION 58 58 67
1800 W. FIFTH ST.
GREENVILLE 27834 919 752-2159
U OF NC

YOUNGBLOOD, ROBERT WATKINS GS /TS AC
ECU SCHOOL OF MEDICINE 55 63 64
DEPT. OF SURGERY
GREENVILLE 27858 919 551-5418
JOHNS HOPKINS

GYNECOLOGY

BORCHERT, LYNN GORDON GYN AC
PO BOX 160 68 69 80
STOKES 27884 919 752-0973
U OF MICHIGAN

CLEMENT, JAMES EDWIN GYN AC
101 BETHESDA DRIVE 54 55 62
GREENVILLE 27834 919 758-4181
DUKE

DEYTON, ROBERT GUY, JR. GYN AC
101 BETHESDA DRIVE 55 55 64
GREENVILLE 27834 919 758-4181
DUKE

HEMATOLOGY

CHAMBERLAIN, JACK KENNETH HEM /ON AC
DEPT. OF MEDICINE 54 55 80
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2560
U OF ILLINOIS

DAINER, PAUL M. HEM /ON AC
DEPT. OF HEMATOLOGY/ONCOLOGY 72 73 88
ECU SCH. OF MED 3E-106 BRODY
GREENVILLE 27858 919 551-2560
JEFFERSON

KNUPP, CHARLES LEONARD HEM /IM AC
ECU SCHOOL OF MEDICINE 76 77 84
DEPT. OF MEDICINE
GREENVILLE 27834 919 551-2560
U OF MARYLAND

LEWKOW, LAWRENCE M. HEM AC
ECU SCHOOL OF MEDICINE 75 75 88
DEPT. OF HEM,BRODY HALL,3E127
GREENVILLE 27858 919 551-2560
NEW YORK MED COL

INTERNAL MEDICINE

ADAMS, HARRY GLENN IM /ID AC
DEPT. OF MEDICINE 68 68 84
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2550
BAYLOR

ARTIS, ISAAC AMOS, JR. IM AC
114 ROANOKE PLACE 72 74 82
P. O. BOX 7304
GREENVILLE 27834 919 756-6986
MEHARRY MED COLL

BARRIER, CHARLES HAROLD IM AC
1705 W. 6TH ST., BLDG. E 79 80 78
GREENVILLE 27834
U OF NC

BENTZEL, CARL JOHAN IM /NEP AC
DEPT. OF RENAL MED. 58 58 85
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2545
U OF ALABAMA

BREZINA, DAWN S. IM R
1612 TREYBROOKE CIR. 75 75 88
GREENVILLE 27834 919 757-2961
U OF MIAMI

BUSHER, JANICE THERESE IM AC
133 ANTLER RD. 79 80 87
GREENVILLE 27834 919 551-4633
MED SCH-UMDNJ

BUTLER, THOMAS WAYNE IM /HEM AC
DEPT.OF MED/HEM-ONCOLOGY 81 81 90
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2560
U OF TENNESSEE

BYRUM, GRAHAM VANCE, JR. IM /NEP AC
6 DOCTORS PARK 80 81 79
GREENVILLE 27834 919 752-8880
BOWMAN GRAY

CLEVELAND, CRAWFORD H., JR. IM /AI R
ECU SCHOOL OF MEDICINE 75 75 90
SECT. ALLERGY AND IMMUNOLOGY
GREENVILLE 27858 919 551-3424
TULANE U

COOK, FIONA JACKSON IM AC
DEPT. OF MEDICINE 84 84 90
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4633
DUKE

COOK, PAUL P. IM /ID AC
DEPT. OF MEDICINE 82 84 88
ECU SCHOOL OF MEDICINE
GREENVILLE 27858
MED COLL OF GA

CROSKERY, RICHARD WILLIAM IM AC
1705 W. 6TH ST., BLDG. E 81 83 84
GREENVILLE 27834 919 752-6101
OHIO STATE U

DELLASEGA, MARK IM /GE AC
1705 W. SIXTH ST. 75 76 83
GREENVILLE 27834 919 752-6101
U OF KANSAS

ENGEL, JEFFREY PHILLIP IM /ID AC
DEPT. OF MEDICINE 81 82 89
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2550
JOHNS HOPKINS

FURTH, EUGENE DAVID IM /END AC
DEPT. OF MEDICINE 54 57 77
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2570
CORNELL U

GAMBLE, ELIZABETH RHODES IM /GER AC
607 WINSTEAD RD. 77 80 83
GREENVILLE 27834 919 756-7901
U OF NC

HAMSTEAD, STEVEN LYNN IM AC
201 N. MAIN ST. 85 86 84
FARMVILLE 27828 919 753-7141
BOWMAN GRAY

HOLTER, JOHN FREDERICK IM /PUD AC
DEPT. OF MEDICINE 79 80 85
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4653
PENN STATE U

LANGLEY, RICKY LEE IM /OM AC
DEPT. OF PREVENTIVE MED. 83 85 80
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-3227
BOWMAN GRAY

LEE, JESSE THOMAS, III IM /ON AC
1705 W. 6TH ST., BLDG. E 81 81 78
GREENVILLE 27834 919 752-4610
DUKE

LICHSTEIN, PETER RIBACK IM AC
DEPT. OF MEDICINE 76 78 82
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4633
U OF MICHIGAN

METZGER, W. JAMES IM /AI AC
DEPT. OF MED/ALLERGY 71 71 85
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2562
NORTHWESTERN U

MONROE, EDWIN WALL IM AC
1257 KENT PLACE LN. 51 51 57
WINSTON-SALEM 27104 919 723-1456
U OF PENN

NSIEN, EPHRAIM EMMANUAL IM /GE AC
DEPT. OF MEDICINE 83 84 90
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4652
TUFTS U

O'BRIEN, THOMAS FRANCIS, JR. IM /ADM AC
ECU SCHOOL OF MEDICINE 57 61 61
BRODY BLDG. AD37-A
GREENVILLE 27858 919 551-2149
YALE

74. PITT COMPONENT SOCIETY (Continued)

EDEN, JAMES GWYN, JR. IM /P AC
DEPT. OF MEDICINE 79 80 84
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4633
U OF NC

IPPIN, RICHARD LEE IM AC
201 N. MAIN ST. 83 84 80
FARMVILLE 27828 919 753-7141
EAST CAROLINA U

IAND, CECIL HOLMES, JR. IM /PUD AC
1800 W. FIFTH STREET 61 61 69
GREENVILLE 27834 919 752-3185
U OF NC

UMLEY, RICHARD LEE IM /ID AC
DEPT. OF MEDICINE 78 79 84
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2550
U OF NC

HULTZABERGER, RICHARD Z. IM AC
620 S. MEMORIAL DR. 81 84 88
GREENVILLE 27834 919 752-6101
HAHNEMANN

NYDER, DAVID KEITH IM /END AC
DEPT. OF MED/SEC. OF ENDOC. 81 82 90
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2571
MED COLL OF OHIO

TEEL, MARILYN J. L. IM R
1301 KINGSBROOK RD. 89 00 85
GREENVILLE 27858 919 551-4633
EAST CAROLINA U

UCKER, DONALD HUGH IM /CD AC
1705 W. SIXTH STREET 58 58 64
GREENVILLE 27834 919 752-6101
DUKE

URNER, ROBERT COY IM AC
DEPT. OF MEDICINE 76 76 80
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4633
U OF ILLINOIS

SALA, STEPHEN JON IM /END AC
104 KENILWORTH RD. 82 84 90
GREENVILLE 27858 919 551-2571
U OF CHICAGO

VADE, PATRICIA ANN IM C
PITT MEMORIAL, RM. 389TA 84 86 91
GREENVILLE 27858 919 551-4633
U OF CINCINNATI

VAIVERS, LEO EDWARD IM AC
133 ANTLER RD. 80 81 87
GREENVILLE 27834 919 551-4633
MED SCH-UMDNJ

VARREN, MARK LOWE IM /END AC
1705 W. 6TH ST., BLDG. E 84 86 82
GREENVILLE 27834 919 752-6101
U OF NC

VILLIAMS, MICHAEL BRIAN IM /CD AC
ECU SCHOOL OF MEDICINE 84 84 91
SECTION OF CARDIOLOGY
GREENVILLE 27858 919 551-4651
U OF MICHIGAN

EUROLOGY

LEMING, DUARD FRANCIS, JR. N AC
2501 STANTONSBURG RD. 72 73 79
GREENVILLE 27834 919 752-4848
BOWMAN GRAY

IARDY, JOHN GREGG N AC
2501 STANTONSBURG RD. 73 73 78
GREENVILLE 27834 919 752-4848
BOWMAN GRAY

ICNAIR, NANCY L. N AC
2501 STANTONSBURG RD., ECNA 86 88 90
GREENVILLE 27834 919 752-4848
MED COLL OF GA

SHUPING, JOHN ROSS N AC
2501 STANTONSBURG RD. 75 76 73
GREENVILLE 27834 919 752-4848
BOWMAN GRAY

STEEL, JOHN GRIFFITH N AC
2501 STANTONSBURG RD. 77 79 85
GREENVILLE 27834 919 752-4848
U OF NC

NEPHROLOGY

BURKART, THOMAS ELMA NEP AC
6 DOCTOR'S PARK 73 74 79
GREENVILLE 27834 919 752-8880
MED U OF SC

FERGUSON, ALFRED LEA NEP /IM AC
6 DOCTOR'S PARK 61 61 70
GREENVILLE 27834 919 752-8880
U OF TENNESSEE

GALPHIN, CLAUDE MABRY NEP AC
123 ROBIN ROAD 80 80 85
GREENVILLE 27858 919 522-5725
MED U OF SC

KENDRICK, PAUL WAYNE NEP /IM AC
6 DOCTORS PARK 66 72 75
STANTONSBURG ROAD
GREENVILLE 27834 919 752-8880
U OF ALABAMA

KHURI, RAJA N. NEP AC
DEPT. OF MED./RENAL MED. 59 64 68
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2545
AMER.U OF BEIRUT

MERRILL, RICHARD HOSMER NEP /IM AC
DEPT. OF MEDICINE 66 67 80
ECU SCHOOL OF MEDICINE
GREENVILLE 27834 919 551-2545
BOSTON U

NEWMAN, WALTER JOSEPH NEP /IM AC
6 DOCTOR'S PARK 75 78 82
GREENVILLE 27834 919 752-8880
DUKE

WAUGH, WILLIAM HOWARD NEP /IM AC
DEPT. OF PHYSIOLOGY 48 48 72
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2773
TUFTS U

NEONATAL-PERINATAL MEDICINE

KOPELMAN, ARTHUR NPM AC
DEPT. OF PEDIATRICS 63 63 79
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4787
U OF ROCHESTER

WIMMER, JOHN EASTER, JR. NPM AC
DEPT. OF PEDIATRICS 71 74 82
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4787
MED COLL OF VA

NEUROLOGICAL SURGERY

HARDY, IRA MAY, II NS AC
2325 STANTONSBURG RD. 63 63 68
GREENVILLE 27834 919 752-5156
U OF NC

JONES, FRANKLIN D. NS AC
2325 STANTONSBURG RD. 77 81 86
GREENVILLE 27834 919 752-5156
EASTERN VA

LEE, K. STUART NS AC
2325 STANTONSBURG RD. 81 83 78
GREENVILLE 27834 919 752-5156
EAST CAROLINA U

LEONARD, JOHN RICHARD, III NS AC
125 MOYE BOULEVARD 70 70 76
GREENVILLE 27834 919 752-5156
U OF NC

TIMMONS, ROBERT LANSING NS AC
2325 STANTONSBURG RD. 53 58 59
GREENVILLE 27834 919 752-5156
HARVARD

OBSTETRICS AND GYNECOLOGY

ATKINSON, SAMUEL MARVIN, JR. OBG AC
DEPT. OF OB-GYN 61 61 85
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4669
DUKE

BRAME, ROBERT GRIFFIN OBG AC
DEPT. OF OB-GYN 55 55 62
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-5200
U OF NC

BROWN, WILLIAM EDWARD OBG AC
2245 STANTONSBURG RD., STE. H 81 82 79
GREENVILLE 27834 919 757-3131
EAST CAROLINA U

BUTLER, DOROTHY WOLF OBG R
ECU, DEPT. OF OB/GYN 90 00 90
GREENVILLE 27858 919 551-4669
U OF TX-HOUSTON

CAMPBELL, DIANE JANE OBG AC
2315 EXECUTIVE PARK CIR. 77 78 86
PO BOX 8307
GREENVILLE 27835 919 830-1035
MEHARRY MED COLL

DELLINGER, ERIC HENRY OBG AC
STANTONSBURG RD, ECU 86 88 91
GREENVILLE 27858 919 551-4983
EAST CAROLINA U

DOUGLAS, EDGAR SMITH, JR. OBG AC
101 BETHESDA DRIVE 61 64 68
GREENVILLE 27834 919 758-4181
MED COLL OF VA

EASLEY, HENRY ALEXANDER, III OBG AC
101 BETHESDA DR. 82 82 79
GREENVILLE 27834 919 758-4181
U OF NC

EASLEY, KEVIN OWEN OBG /LM AC
101 BETHESDA DR. 83 87 89
GREENVILLE 27834 919 758-4181
U OF NC

FREEMAN, GEORGE HARTLEY OBG AC
2245 STANTONSBURG RD. STE. H 85 88 89
GREENVILLE 27834 919 757-3131
MED COLL OF VA

GATES, HERBERT S., JR. OBG AC
DEPT. OF OB-GYN 58 82 89
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-5904
GEO WASHINGTON U

GOODMAN, FLOYD KEITH OBG AC
BLDG. #5, DOCTOR'S PARK 79 81 91
GREENVILLE 27834 919 758-5246
U OF OKLAHOMA

GREEN, STEPHEN CLARK OBG AC
ECU SCHOOL OF MEDICINE 66 66 90
DEPT. OF OB-GYN
GREENVILLE 27858 919 551-5903
TULANE U

HAVEN, ANDREW EDDY OBG AC
2245 STANTONSBURG RD.,STE.H 78 80 83
GREENVILLE 27834 919 757-3131
U OF NC

JONES, DENNIS EBLEN DARNELL OBG AC
DEPT. OF OB-GYN 68 68 78
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4610
DUKE

MISAS, JOSE ENRIQUE OBG AC
ECU, DEPT. OBG 78 78 91
GREENVILLE 27858
MED COLL VA

SATTERFIELD, G. HOWARD, JR. OBG AC
DOCTOR'S PARK, BUILDING #5 57 57 63
GREENVILLE 27834 919 758-5246
DUKE

SEHGAL, NARINDER NATH OBG AC
DEPT. OF OB-GYN 54 61 85
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4622
M C OF AMRITSAR

74. PITT COMPONENT SOCIETY (Continued)

TAFT, RICHARD CHESSON OBG AC
101 BETHESDA DRIVE 72 72 77
GREENVILLE 27834 919 758-4181
U OF NC

ONCOLOGY

CHAPLINSKI, THOMAS JOSEPH ON /HEM AC
1705 W. 6TH ST. 77 78 84
GREENVILLE 27834 919 752-6101
U OF CHICAGO

RAAB, MARY JERISTA ON /HEM AC
DEPT. OF MEDICINE 68 68 78
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2383
MED COLL OF PENN

RAAB, SPENCER O. ON /HEM AC
DEPT. OF MEDICINE 54 57 78
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2383
ST U OF NY-BUFF

OPHTHALMOLOGY

BODE, DONALD DENBY, JR. OPH AC
2573 STANTONSBURG RD. 74 75 86
GREENVILLE 27834 919 752-0313
U OF MIAMI

HOLLAND, JAMES EUGENE OPH AC
2573 STANTONSBURG ROAD 75 75 81
GREENVILLE 27834 919 752-0313
U OF MISSOURI

MONROE, WILLIAM MURCHISON OPH AC
DOCTORS PK, STE. I 64 64 70
STANTONSBURG ROAD
GREENVILLE 27834 919 758-4166
U OF NC

VAN HOUTEN, PETER A. OPH AC
301 BOWMAN GRAY DR. 82 86 88
GREENVILLE 27834 919 758-5800
U OF MIAMI

VISCARDI, JEFFREY J. OPH AC
301 BOWMAN GRAY DR. 85 86 90
GREENVILLE 27834 919 758-5800
DOWNSTATE ME CTR

WHITE, STEVEN MERLE OPH AC
301 BOWMAN GRAY DR. 59 63 68
GREENVILLE 27834 919 758-5800
MED U OF SC

ORTHOPEDIC SURGERY

BARTLETT, EDWIN CLARY ORS /SM AC
622 MEDICAL DR. 78 79 84
GREENVILLE 27834 919 752-4613
U OF NC

BOWMAN, JAMES FREDERICK ORS /SM AC
604 MEDICAL DR. 61 66 67
GREENVILLE 27834 919 758-1777
TEMPLE U

CRISP, SELLERS LUTHER ORS AC
622 MEDICAL DR. 60 60 68
GREENVILLE 27834 919 752-4613
U OF NC

HAMILTON, GENE THOMAS ORS AC
622 MEDICAL DR. 67 68 74
GREENVILLE 27834 919 752-4613
NORTHWESTERN U

HARVELL, JAMES C., JR. ORS AC
604 MEDICAL DR. 83 84 80
GREENVILLE 27834 919 758-1777
EAST CAROLINA U

MCGILLICUDDY, DENIS MICHAEL ORS AC
604 MEDICAL DR. 75 77 81
GREENVILLE 27834 919 758-1777
U OF MICHIGAN

WILHELMSEN, BRUCE ORS AC
604 MEDICAL DRIVE 79 79 85
GREENVILLE 27834 919 758-1777
DUKE

WILLIAMS, RANDOLPH MEADE ORS AC
604 MEDICAL DR. 71 71 79
GREENVILLE 27834 919 758-1777
U OF VIRGINIA

WOOTEN, JOHN LEMUEL ORS L/RT
1807 CIRCLE DR. 47 54 55
GREENVILLE 27834 919 752-4613
DUKE

WOOTEN, STEPHEN LAMONT ORS /HS AC
622 MEDICAL DR. 81 82 80
GREENVILLE 27834 919 752-4613
DUKE

OTOLARYNGOLOGY

BOST, WILLIAM STUART, JR. OTO AC
8 DOCTOR'S PARK 62 62 70
PO BOX 5007
GREENVILLE 27834 919 752-5227
U OF NC

CAMNITZ, PAUL SAMUEL OTO AC
BOX 5007 74 74 79
GREENVILLE 27834 919 752-5227
U OF NC

KNOTT, RUFUS HENRY, II OTO /A AC
PO BOX 5007 64 64 72
GREENVILLE 27835 919 752-5227
U OF NC

WIGGS, WILLIAM J., JR. OTO S
RR #8, BOX 223-C 90 86
GREENVILLE 27834 919 830-8832
EAST CAROLINA U

PSYCHIATRY

AMES, DAVID ANTHONY P AC
313 LONGMEADOW ROAD 68 69 84
GREENVILLE 27858 919 752-7151
MCGILL U

ANTONACCI, DIANA JO P AC
DEPT. OF PSYCHIATRIC MED. 82 83 90
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2663
SOU IL MED SCH

DOLINAR, LOUIS JOHN P AC
ECU SCHOOL OF MEDICINE 76 78 88
DEPT. OF PSYCHIATRY
GREENVILLE 27858 919 551-2986
U OF LOUISVILLE

EVANS, AMOS RAY P AC
1705 W. SIXTH STREET, BLDG. H 62 62 66
GREENVILLE 27834 919 758-4810
U OF NC

FINESTONE, DOUGLAS HOWARD P /PYA AC
ECU SCHOOL OF MED. 79 79 80
DEPT. OF PSYCHIATRY
GREENVILLE 27858 919 551-2986
MED COLL OF VA

GREGORY, JERRY GLEN P AC
DEPT. OF PSYCHIATRY 69 69 83
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2660
U OF OKLAHOMA

JAMES, J. FRANK P AC
DEPT. OF PSYCHIATRY 63 63 67
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2668
U OF TENNESSEE

JONNALAGADDA, M. RAO P /PH AC
W.B.JONES ADATC 64 76 76
RT. #1, BOX 20-A
GREENVILLE 27834 919 830-3426
GUNTUR MED COLL

LANE, WINSTON EARL, III P AC
1705 W. SIXTH ST., BLDG. H 85 87 90
GREENVILLE 27834 919 758-4810
EAST CAROLINA U

MANLY, DAVID TUPPER P AC
115 ROSEMOND DR. 86 87 84
GREENVILLE 27834 919 758-4062
U OF NC

MATHIS, JAMES LARRY P AC
DEPT. OF PSYCHIATRY 49 49 77
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2660
ST LOUIS U

NELSON, PHILIP GROESBECK P L/RT
1211 E. ROCK SPRING RD. 54 57 59
GREENVILLE 27834 919 752-8118
U OF LOUVAIN

OAKLEY, STANLEY PRESTON, JR. P AC
DEPT. OF PSYCHIATRY 82 83 79
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2663
EAST CAROLINA U

PAPPAS, PAMELA ANNE P AC
DEPT. OF PSYCHIATRIC MED. 79 83 85
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2404
BOWMAN GRAY

SIMMONS, EVERETT CASEY P AC
DEPT. OF PSYCHIATRY 71 72 82
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2660
U OF TENNESSEE

SMERASKI, PHILIP JOHN P AC
DEPT. OF PSYCHIATRIC MED. 81 83 85
ECU SCHOOL OF MED. BRODY 4E-98
GREENVILLE 27858 919 551-2660
MED COLL OF PENN

WALKER, WILLIAM RAY P AC
DEPT. OF PSYCHIATRY 68 68 77
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2661
MED COLL OF VA

YONGUE, JUDITH S. P AC
107-C COMMERCE ST. 62 59 78
GREENVILLE 27858 919 355-2768
U OF NC

PEDIATRICS

BRAMLEY, MICHAEL LAIRD PD AC
300 BETHESDA DR. 73 75 77
GREENVILLE 27834 919 752-7141
YALE

COHEN, DANIEL MICHAEL PD AC
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4822

DAESCHNER, CHARLES WILLIAM,III PD AC
ECU SCHOOL OF MEDICINE 45 76 90
288 W. PCMH
GREENVILLE 27858 919 551-4676
U OF TEXAS

DAVIS, GEORGE EDWARD PD AC
1800 W. 5TH ST., STE. 8 70 71 79
GREENVILLE 27834 919 758-1750
U OF TENNESSEE

EISELE, JOHN EVANS PD /PM AC
DEPT. OF PHYSICAL MED/REHAB. 65 67 87
PO BOX 6028
GREENVILLE 27834 919 551-4440
U OF WISCONSIN

ENGELKE, STEPHEN CARL PD /NPM AC
220 PINEVIEW DRIVE 74 79 82
GREENVILLE 27834 919 551-4665
JOHNS HOPKINS

FIGUEROA, ELIZABETH PD AC
ECU SCHOOL OF MEDICINE 82 83 89
DEPT. OF PEDIATRICS
GREENVILLE 27858 919 551-2535
NEW YORK MED COL

FOREMAN, SUSAN DOWNER PD AC
300 BETHESDA DR. 78 78 86
GREENVILLE 27834 919 752-7141
U OF NC

HAAR, FREDERICK BEHREND PD L
610 S. OAK STREET 32 32 35
GREENVILLE 27834 919 752-2039
JEFFERSON

HALLOCK, JAMES ANTHONY PD AC
OFFICE OF THE DEAN,AD 48 67 68 88
ECU SCH. OF MED. BRODY BLDG.
GREENVILLE 27858 919 551-2201
GEORGETOWN U

74. PITT COMPONENT SOCIETY (Continued)

HUGHES, JAMES LEWIS PD AC
DEPT. OF PEDIATRICS 55 55 82
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 355-2460
U OF MARYLAND

IRONS, MALENE GRANT PD /GPM L/RT
1104 W. ROCK SPRING ROAD 41 46 46
GREENVILLE 27834 919 752-3423
MED COLL OF VA

IRONS, THOMAS GRANT PD AC
ECU SCHOOL OF MEDICINE 72 72 82
OFFICE OF THE DEAN-AD37
GREENVILLE 27858 919 551-2983
U OF NC

KATARIA, SUDESH PD AC
DEPT. OF PEDIATRICS 65 73 80
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-3198
LADY HARDINGE

KENNY, JEAN BRYCE FELTY PD /ID AC
DEPT. OF PEDIATRICS 57 57 83
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2511
JOHNS HOPKINS

KUSHNICK, THEODORE PD AC
DEPT. OF PEDIATRICS 51 53 80
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2525
HARVARD

LAUPUS, WILLIAM EDWARD PD /PNP AC
PREVENTIVE MED/PUBLIC HEALTH 45 45 76
ECU SCH. OF MED. DEAN EMERITUS
GREENVILLE 27858 919 551-2201
YALE

MARKELLO, JAMES ROSS PD AC
DEPT. OF PEDIATRICS 61 62 78
ECU SCHOOL OF MEDICINE
GREENVILLE NC 27858 919 551-2539
ST U OF NY-BUFF

MONROE, CHARLES T. PD /PH AC
1825 W. SIXTH ST. 80 81 87
GREENVILLE 27834 919 752-4141
U OF NC

PREVATTE, STEVEN HAROLD PD AC
300 BETHESDA DR. 86 86 90
GREENVILLE 27834 919 752-7141
EAST CAROLINA U

RICKER, ALYNE THERESA PD /PDE AC
DEPT. OF PEDIATRICS 77 77 89
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2516
U OF GENEVA

SANG, CHARLIE JOSEPH, JR. PD /PDC AC
ECU SCHOOL OF MEDICINE 83 83 90
DEPT. OF PED,DIV. PED CARD
GREENVILLE 27858 919 551-5601
TULANE U

SHAPPLEY, BEN GORDON PD AC
300 BETHESDA DR. 66 66 74
GREENVILLE 27834 919 752-7141
U OF VIRGINIA

SMITH, JAMES DAVID PD S
2284 ASHLEY RIVER RD. #1020 90 86
CHARLESTON, SC 29414 803 763-2265
EAST CAROLINA U

STEWART, ANGELA GRACE PD AC
RT. #2, BOX 94-5C 80 81 84
WINTERVILLE 28590 919 355-3773
RUSH MED COLL

SUMPTER, EDWIN ALLEN PD AC
DEPT. OF PEDIATRICS 56 56 82
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-3535
U OF VIRGINIA

THIELE, RONALD LEWIS PD /PH AC
503 QUEEN ANNE'S ROAD 48 49 73
GREENVILLE 27858 919 756-6721
WAYNE STATE U

TINGELSTAD, JON BUNDE PD /PDC AC
DEPT. OF PEDIATRICS 60 61 76
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2540
HARVARD

TREVATHAN, G. EARL, JR. PD AC
AMBULATORY PED. SECT. 51 54 54
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2535
U OF COLORADO

WILLSON, CHARLES FREDERICK PD AC
300 BETHESDA DR. 74 76 81
GREENVILLE 27834 919 752-7141
U OF VIRGINIA

PEDIATRIC RADIOLOGY

KODROFF, MICHAEL BARRY PDR /NM AC
EASTERN RADIOLOGIST 67 67 85
#9 DOCTORS PARK
GREENVILLE 27858 919 551-4972
JEFFERSON

PEDIATRIC HEMATOLOGY-ONCOLOGY

HOLBROOK, CARTER TATE, III PHO /PD AC
DEPT. OF PEDIATRICS 75 75 80
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4676
U OF NC

PHYSICAL MEDICINE AND REHABILITATION

ALSENTZER, ULRICH KARL PM AC
REGIONAL REHABILITATION CTR. 78 78 85
P. O. BOX 6028
GREENVILLE 27834 919 551-4440
U OF TUEBINGEN

DEBOGORSKI, JOZEFA PM AC
DEPT. OF PHYSICAL MED.REHAB. 75 82 86
PO BOX 6028
GREENVILLE 27834 919 551-4440
KRAKOW-POLAND

MCELLIGOTT, JACINTA MARY PM AC
ECU SCHOOL OF MEDICINE 78 84 89
DEPT. PHYSICAL MED & REHAB.
GREENVILLE 27858 919 757-4440
CO OF SURG-IRE

RECKER, SCOTT F. PM AC
PO BOX 6028 80 81 87
REGIONAL REHABILITATION CTR.
GREENVILLE 27834 919 551-4440
HAHNEMANN

VERNICK, SANFORD HERBERT PM AC
REGIONAL REHAB. CENTER 79 83 90
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4440
U CIUDAD JUAREZ

PEDIATRIC NEPHROLOGY

GRAY, ROBERTA SKINNER PNP AC
DEPT. OF PEDIATRICS 72 72 84
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4963
U OF NC

PLASTIC SURGERY

DAWKINS, HOWARD GARRETT, JR. PS /GS AC
2577 STANTONSBURG ROAD 68 68 75
GREENVILLE 27834 919 752-1406
BOWMAN GRAY

PATHOLOGY, ANATOMICAL AND CLINICAL

CHRISTIE, JOHN DOYLE PTH AC
DEPT.OF CLI.PTH/DIAGNOSTIC MED 82 85 89
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-5988
U OF TEXAS

EASTMAN, JOSEPH RILUS, III PTH /BLB AC
DEPT.OF CLI. PTH/DIAG.MED. 84 84 89
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-5094
INDIANA U

FINLEY, JAMES LEO PTH AC
DEPT. OF CLI. PTH. BRODY 1F79 78 83 84
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4495
MED COLL OF PENN

GAGNON, GREGORY ARTHUR PTH AC
DEPT.OF CLI. PTH/DIAG. MED. 82 82 89
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4495
LA STATE U

GILBERT, CHARLES FRANKLIN PTH AC
640 MEDICAL DR., STE. D 59 59 66
GREENVILLE 27834 919 551-4495
U OF NC

HANRAHAN, LEO ROBERT, JR. PTH /BLB AC
ECU SCHOOL OF MEDICINE 72 77 78
DEPT. OF PATHOLOGY
GREENVILLE 27858 919 551-2806
SUNY-SYRACUSE

HATCHER, WALTER BENJAMIN PTH /DR R
108-B CONCORD DR. 86 00 83
GREENVILLE 27834 919 355-8725
EAST CAROLINA U

JOSHI, VIJAY V. PTH AC
DEPT. OF CLI. PTH/DIAG. MED. 60 72 88
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4495
B J MED COLLEGE

LARKIN, ERNEST WADDILL, III PTH AC
DEPT.OF CLI. PTH/DIAG. MED. 70 71 78
ECU SCH. OF MED BRODY 1F-79
GREENVILLE 27858 919 551-5911
MED COLL OF VA

NANCE, KEITH VAN ALLEN PTH AC
ECU, DEPT. OF CLINICAL PTH 85 87 89
GREENVILLE 27858 919 551-5912
EAST CAROLINA U

NEILL, JAMES. S. A. PTH
ECU SCH. OF MEDICINE 78 78 88
DEPT. OF CLI. PATHOLOGY
GREENVILLE 27858 919 551-4951
U OF MISSISSIPPI

NORRIS, H. THOMAS PTH AC
DEPT. OF PATHOLOGY 59 60 83
PITT COUNTY MEM. HOSPITAL
GREENVILLE 27834 919 551-4951
U OF SOU CALIF

PARK, H. KIM PTH AC
DEPT PTH/LABORATORY MED. 69 75 77
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-5911
EWHA UNIV

RILEY, ROGER STEYER PTH AC
3704 WALNUT DR. 78 78 90
GREENVILLE 27834 919 551-5017
WEST VA U

SILVERMAN, JAN FRANKLIN PTH AC
DEPT.OF PTH, BRODY BLDG. 1F-79 70 70 84
ECU SCHOOL OF MEDICINE
GREENVILLE 27834 919 551-5910
MED COLL OF VA

STRAUSBAUCH, PAUL HENRY PTH AC
DEPT. OF PATHOLOGY 74 78 79
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2809
U OF MIAMI

VOLKMAN, ALVIN PTH AC
DEPT. OF PATHOLOGY 51 52 78
ECU SCH. OF MED BRODY 7E-124
GREENVILLE 27858 919 551-2071
ST U OF NY-BUFF

WEST, ROBERT LEE PTH AC
RT. 8, BOX 769 59 59 67
GREENVILLE 27834 919 551-4496
U OF NC

74. PITT COMPONENT SOCIETY (Continued)

PULMONARY DISEASES

DRIVER, ALBERT GARDNER, JR. PUD /IM AC 78 80 84
DEPT. OF MEDICINE
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4653
PENN STATE U

KATARIA, YASH PAL PUD /IM AC 59 60 79
DEPT. OF MEDICINE
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4653
M C OF AMRITSAR

MANN, RICHARD HARVEY PUD AC 82 84 89
DEPT. OF MED/PULMONARY DIV.
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-4653
U OF NC

SHAW, ROBERT ARNETT PUD /IM AC 76 77 82
1705 W. SIXTH STREET
GREENVILLE 27834 919 752-6101
DUKE

RADIOLOGY

JOHNSON, DENNIS RAY R AC 82 83 80
#9 DOCTORS PARK
GREENVILLE 27834 919 752-5000
EAST CAROLINA U

KOWALSKI, HENRYK M. R AC 81 84 89
#9 DOCTOR'S PARK
GREENVILLE 27858 919 752-5000
TUFTS U

MCCONNELL, ROBERT WILLIAM R /NM AC 59 59 69
EASTERN RADIOLOGISTS
#9 DOCTORS PARK
GREENVILLE 27834 919 752-5000
MED COLL OF VA

TAYLOR, ALLEN R AC 47 52 54
EASTERN RADIOLOGISTS
#9 DOCTORS PARK
GREENVILLE 27834 919 752-5000
DUKE

TRIPP, MICHAEL DAVID R AC 81 82 88
307 KENILWORTH DR.
GREENVILLE 27834 919 884-6037
EAST CAROLINA U

VAINRIGHT, JULIAN R., JR. R /NUR AC 83 84 89
#9 DOCTOR'S PARK
GREENVILLE 27834 919 752-5000
U OF NC

VERMUND, HALVOR R AC 43 43 90
DEPT. OF RADIATION ONCOLOGY
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2900
U OF OSLO

RHEUMATOLOGY

RAMSDELL, CHARLES MICHAEL RHU /IM AC 65 65 76
1705 W. 6TH ST., BLDG. E
GREENVILLE 27834 919 752-6101
LA STATE U

TREADWELL, EDWARD LOUIS RHU /IM AC 75 76 83
DEPT. OF MEDICINE
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2533
DUKE

WHITE, RANDAL EARL RHU AC 80 80 85
407 CEDARHURST RD.
GREENVILLE 27834 919 752-6101
WEST VA U

RADIATION ONCOLOGY

ALQAISI, MUNTHER E. RO AC 73 83 86
ECU SCHOOL OF MED.
DEPT.OF RADIATION ONCOLOGY
GREENVILLE 27858 919 551-2900
BAGHDAD U

RAKFAL, SUSAN MAFFEY RO AC 81 82 86
ECU SCHOOL OF MED.
RADIATION ONCOLOGY CTR.
GREENVILLE 27858 919 551-2900
RUTGERS MED SCH

THERAPEUTIC RADIOLOGY

WILEY, ALBERT LEE, JR. TR /NM AC 63 65 88
ECU SCHOOL OF MEDICINE
INTERIM DIR., ECU CANCER CTR.
GREENVILLE 27858 919 551-2900
U OF ROCHESTER

THORACIC SURGERY

CARTER, JAMES WALTER TS /GS AC 64 64 72
905 JOHNS HOPKINS DR.
GREENVILLE 27834 919 758-1747
JOHNS HOPKINS

COHEN, DANIEL MICHAEL TX/PD C 75 77 91
ECU SCH. OF MED.
GREENVILLE 27858 919 551-4822
U. WITWATERSRAND

THOMAS, FRANCIS THORNTON TS /GS AC 64 67 81
DEPT. OF SURGERY
ECU SCHOOL OF MEDICINE
GREENVILLE 27858 919 551-2620
U OF MINN

VICK, JOHN BERNARD TS /GS AC 57 57 66
905 JOHNS HOPKINS DR.
GREENVILLE 27834 919 758-1747
BOWMAN GRAY

UROLOGICAL SURGERY

GAVIGAN, JAMES RICHARD U AC 67 68 75
2 DOCTOR'S PARK
GREENVILLE 27834 919 752-5077
U OF KENTUCKY

HINES, BENJAMIN G. U AC 82 83 88
#2 DOCTOR'S PARK
GREENVILLE 27834 919 752-5077
U OF NC

JANOSKO, EDWARD ORESTES, II U /N/A AC 74 75 80
#2 DOCTORS PARK
GREENVILLE 27834 919 752-5077
YALE

SALLE, GEORGE FREDERIC U L 33 33 46
1703 W. SIXTH STREET
GREENVILLE 27834 919 752-2507
MED COLL OF VA

WALSH, EMMETT JAMES, JR. U AC 60 60 68
2 DOCTOR'S PARK
GREENVILLE 27834 919 752-5077
ST LOUIS U

VASCULAR SURGERY

POWELL, CHARLES S. VS /GS AC 78 80 88
ECU SCHOOL OF MEDICINE
DEPT. OF SURGERY
GREENVILLE 27858 919 551-4667
U OF KENTUCKY

75. POLK COMPONENT SOCIETY

OFFICERS—**President:** Richard R. Gentry, M.D., P.O. Box 578, Columbus, 28722 (704 894-3203)
Secretary: Kenneth Curl, M.D., 201 Hospital Dr., Columbus 28722 (704 894-3016)

FAMILY PRACTICE

BLOMELEY, CHARLES PERRY FP AC 65 65 67
PO BOX 608
COLUMBUS 28722 704 894-8213
HOWARD U

MCCORMACK, SANDRA L. FP AC 79 80 88
1124 LYNN RD.
TRYON 28782 704 859-9783
U OF ILLINOIS

PALMER, ROBERT MARION FP AC 55 56 56
P. O. BOX 1159
TRYON 28782 704 894-3306
MED U OF SC

WOODY, JOHN W. AUSTIN FP L/RT 37 39 40
900 LYNN ROAD
TRYON 28782 704 859-9483
U OF PENN

GENERAL SURGERY

BOLLING, THOMAS VANCE GS AC 74 75 86
208 HOSPITAL DR.
COLUMBUS 28722 704 894-3566
LOMA LINDA U

YURKO, ANTHONY ANDREW GS RT 33 34 72
ROUTE #1, BOX 440
TRYON 28782 704 859-5133
MED COLL OF VA

INTERNAL MEDICINE

PAGTER, AMOS TOWNSEND, JR. IM AC 55 61 61
107 WILDERNESS ROAD
TRYON 28782 704 859-6697
DUKE

OPHTHALMOLOGY

PERRAUT, THOMAS CHRISTOPHER OPH AC 78 79 84
212 HOSPITAL DRIVE
COLUMBUS 28722 704 894-3037
U OF LOUISVILLE

ORTHOPEDIC SURGERY

LOVE, HARRY MORROW PIERCE ORS C 66 68 90
785 PALMER ROAD
MILL SPRING 28756 404 255-1933
JEFFERSON

PSYCHIATRY

BOYER, GEORGE NORMAN P L 46 46 50
913 CAROLINA DRIVE
TRYON 28782 704 859-5439
BOWMAN GRAY

PEDIATRICS

CURL, KENNETH FRANK PD /IM AC 83 87 88
720 HOSPITAL DR.
COLUMBUS 28722 704 894-3016
EMORY U

RADIOLOGY

GENTRY, RICHARD RYAN R /DR AC 79 82 88
PO BOX 578
COLUMBUS 28722 704 894-3203
MED U OF SC

UROLOGICAL SURGERY

DUNN, JACK NEWTON U 60 60 00
214 HOSPITAL DR.
COLUMBUS 28722 704 692-6262
MED U OF SC

76. RANDOLPH COMPONENT SOCIETY

OFFICERS—**President:** Robert Butler, M.D., 2131 Berkley Lane, Asheboro 27203 (919 625-3218)
Secretary: Lawrence Perry, M.D., 638 Winnetka Court, Asheboro 27203 (919 672-6490)

NESTHESIOLOGY

COHEN, NORMAN ALLEN AN C
1421 LAURA CT. 85 89 88
ASHEBORO 27203 919 625-5151
JOHNS HOPKINS

ARDIOVASCULAR DISEASES

DHATT, MALKIAT SINGH CD /IM AC
P. O. BOX 2028 68 74 79
ASHEBORO 27203 919 629-4176
M C OF AMRITSAR

ERMATOLOGY

HENDRICKS, WILLIAM MONROE D /A AC
407 S. COX ST. 74 77 79
ASHEBORO 27203 919 625-8410
MED COLL OF VA

AGNOSTIC RADIOLOGY

KLOSTERMYER, BROOKS VAN SLYKE DR AC
113 CEDAR CREEK DR. 54 59 81
ASHEBORO 27203 919 629-1601
HAHNEMANN

SHACKELFORD, ERNEST D.,JR. DR /NM AC
P. O. BOX 427 52 53 55
ASHEBORO 27204 919 629-0774
MED COLL OF VA

TEAGUE, RANDALL SCOTT DR /EM AC
837 OAKMONT DR. 74 74 84
ASHEBORO 27203 919 625-5151
BOWMAN GRAY

MERGENCY MEDICINE

HELSABECK, ERIC HAIGLER EM /FP AC
1301 BREVARD DR. 75 76 90
ASHEBORO 27203 919 625-5151
U OF NC

AMILY PRACTICE

EDMONDSON, FRANK, JR. FP L/RT
P. O. BOX 2628 37 37 39
ASHEBORO 27203 919 625-3230
TEMPLE U

GOBEL, WILLIAM KENNETH FP AC
P. O. BOX 1886 52 52 54
ASHEBORO 27203 919 672-0090
BOWMAN GRAY

GRAHAM, FREDERICK WILLIAM, JR. FP AC
375 SUNSET AVE. 55 56 59
ASHEBORO 27203 919 625-4215
DUKE

SIMPSON, JOHN LARRY FP AC
DRAWER 220 73 73 73
ASHEBORO 27204 919 625-6174
BOWMAN GRAY

STOUT, CHARLES WALTER FP AC
1533 N. FAYETTEVILLE STREET 58 58 62
ASHEBORO 27203 919 672-0415
U OF NC

VILLIFORD, ROBERT EARL FP AC
208 FOUST STREET 55 55 59
ASHEBORO 27203 919 625-4000
EMORY U

ASTROENTEROLOGY

BUTLER, ROBERT HOYT GE AC
550 WHITE OAK STREET 73 83 83
ASHEBORO 27203 919 625-3218
BOWMAN GRAY

SIGMAN, KENNETH MARTIN GE /IM AC
550 WHITE OAK ST. 80 80 90
ASHEBORO 27203 919 625-3218
OHIO STATE U

GENERAL PRACTICE

BURNETTE, HOWARD OLSEN GP L/RT
108 N. COBLE STREET 47 48 49
RANDLEMAN 27317 919 498-2500
MED COLL OF VA

DALTON, BENNIE BOOKER GP L/RT
8117 BLUE HERON DR. E. 32 33 35
APT. A-105
WILMINGTON 28405 919 686-7817
DUKE

GENERAL SURGERY

GRIFFIN, MARION WILSON GS /TS AC
218-D FOUST ST. 62 62 69
ASHEBORO 27203 919 625-6188
U OF NC

GYNECOLOGY

ADAMS, HARVEY GYN AC
230 FOUST STREET 55 55 62
ASHEBORO 27203 919 625-6128
U OF NC

INTERNAL MEDICINE

ALEXANDER, ANNE D. IM C
5007 BISBEE DR. 87 00 89
GREENSBORO 27407 919 629-8807
MED COLL OF GA

BETTS, CHARLES SAMUEL IM AC
220-A FOUST STREET 67 67 73
ASHEBORO 27203 919 629-7710
U OF VIRGINIA

HAAK, EDWARD DECKER, JR. IM /CD AC
208 FOUST ST. 68 68 85
P. O. BOX 2839
ASHEBORO 27203 919 625-4020
U OF VIRGINIA

QUERY, LUKE WALTER, JR. IM L/RT
1420 WESTMONT DR. 41 41 49
ASHEBORO 27203 919 629-2009
MED COLL OF VA

THORNTON, WILLIAM COOPER, JR. IM AC
550 WHITE OAK STREET 71 72 77
ASHEBORO 27203 919 625-3218
MED U OF SC

OBSTETRICS AND GYNECOLOGY

AINSWORTH, KERRY H. OBG AC
1800 BACK CREEK CT. 62 62 87
ASHEBORO 27203 919 626-2184
NORTHWESTERN U

CUNNINGHAM, ROBERT R. OBG AC
350 N. COX ST., #6 80 83 89
ASHEBORO 27203 919 626-6371
U OF CINCINNATI

DAVIS, GEORGE THOMAS OBG AC
230 FOUST STREET 62 62 66
ASHEBORO 27203 919 625-6128
U OF NC

RISNER, ROBERT J. OBG AC
350 N. COX ST. #6 83 84 88
ASHEBORO 27203 919 626-6371
MED COLL OF OHIO

OPHTHALMOLOGY

JAMISON, EDGAR LAMONT OPH /OTO L/RT
1243 IDLEWOOD RD. 33 34 64
ASHEBORO 27203 919 625-6315
U OF PITTSBURGH

ORTHOPEDIC SURGERY

SINGH, RANBIR ORS AC
542 WHITE OAK STREET 63 76 79
ASHEBORO 27203 919 629-4171
M C OF PUNJAB U

WALHA, GURMUKH SINGH ORS /HS AC
542 WHITE OAK STREET 68 73 81
ASHEBORO 27203 919 629-4171
M C OF AMRITSAR

OTOLARYNGOLOGY

POE, ROBERT WAYNE OTO AC
1808 PORTAGE PARKWAY 82 82 89
ASHEBORO 27203 919 626-3616
U OF ARKANSAS

PEDIATRICS

CANNON, EUGENE BOLIVIA PD L/RT
366 LEXINGTON ROAD 37 37 41
ASHEBORO 27203 919 625-2460
VANDERBILT U

DOWNEY, LUCY MCMASTER BIDDLE PD AC
350 N. COX ST. #8 84 84 84
ASHEBORO 27203 919 626-3560
WEST VA U

PATHOLOGY, ANATOMICAL AND CLINICAL

FITZPATRICK, JOHN FRANCIS PTH /IM L/RT
RANDOLPH PATHOLOGY 43 64 64
P. O. BOX 1948
ASHEBORO 27203 919 629-3282
HAHNEMANN

LIMBER, GERALD KECK PTH AC
2408 BERKLEY PL. 67 72 80
ASHEBORO 27203 919 625-5151
U OF PITTSBURGH

RADIOLOGY

OWEN, CHARLES FLETCHER, JR. R L/RT
P. O. BOX 146 37 37 40
ASHEBORO 27203 919 625-5151
U OF PENN

UROLOGICAL SURGERY

CABERWAL, DALJIT SINGH U AC
P. O. BOX 1509 70 76 77
ASHEBORO 27203 919 625-3997
NILRATAN COLL

HANSPAL, PRITHVI PAL SINGH U AC
171 MCARTHUR STREET 65 77 81
P. O. BOX 1509
ASHEBORO 27203 919 625-3997
SAROJNI NAIDU U

77. RICHMOND COMPONENT SOCIETY

OFFICERS—**President:** Luiz Nascimento, M.D., 222 Main St., Hamlet 28345 (919 582-2140)
Secretary: Hazem El-Droubi, M.D., 111 Mallard Ln., Rockingham 28379 (919 997-5055)

CARDIOVASCULAR DISEASES

HAJISHEIKH, MOOSA — CD /IM AC: 59 60 73
P. O. BOX 1537
ROCKINGHAM 28379
U OF TEHRAN
919 997-3177

DIAGNOSTIC RADIOLOGY

WELLS, DAVID MORELLE — DR AC: 67 67 78
PO BOX 99
ROCKINGHAM 28379
U OF MISSISSIPPI
919 997-6311

FAMILY PRACTICE

CLONINGER, GILES LATHERN, JR. — FP L: 54 54 58
115 MAIN STREET
HAMLET 28345
BOWMAN GRAY
919 582-1319

GARRISON, RALPH BERNARD — FP L/RT: 33 33 35
P. O. BOX 1169
HAMLET 28345
U OF MARYLAND
919 582-2140

HALL, DANIEL CRAWFORD — FP AC: 76 76 80
1219 ROCKINGHAM RD.
SUITE #11, VILLAGE PLAZA
ROCKINGHAM 23879
BOWMAN GRAY
919 895-1989

MCQUEEN, FRED DOUGLAS, JR. — FP AC: 73 74 78
P. O. DRAWER 1257
HAMLET 28345
HOWARD U
919 895-3138

QUEEN, HUGH OSCAR — FP AS: 52 54 55
315 CHARLOTTE STREET
HAMLET 28345
MED COLL OF GA
919 582-3241

RANKIN, PRESSLEY ROBINSON, JR. — FP L: 47 48 50
P. O. BOX 40
ELLERBE 28338
BOWMAN GRAY
919 652-3321

ROSS, THOMAS EDGAR — FP AC: 59 60 61
P. O. BOX 1827
ROCKINGHAM 28379
U OF TENNESSEE
919 895-5253

SCOTT, LEGRAND THURMAN, JR. — FP RT: 63 67 67
1102 CAROLINA DRIVE
ROCKINGHAM 28379
MED U OF SC
919 895-9901

VETTER, JOHN STANLEY — FP AC: 54 56 57
DRAWER 308
ROCKINGHAM 28379
DUKE
919 895-9075

GENERAL PRACTICE

WHITE, PHILIP FLETCHER — GP L: 42 48 48
P. O. BOX 1827
ROCKINGHAM 28379
HAHNEMANN
919 895-5253

GENERAL SURGERY

PETERS, TERRENCE EDWARD — GS /VS AC: 64 64 90
110 MEDICAL CIRCLE
ROCKINGHAM 28379
ST LOUIS U
919 895-0875

INTERNAL MEDICINE

FLANNERY, JOHN EDWARD — IM AC: 80 80 84
BOX 1537
ROCKINGHAM 28379
U OF TEXAS
919 582-0004

VALLABH, VINOD CHITA — IM /GE AC: 80 80 88
PO BOX 1537
ROCKINGHAM 28379
KASTURBA U
919 443-7678

NEPHROLOGY

NASCIMENTO, LUIZ — NEP /IM AC: 70 74 89
PO BOX 1107
HAMLET 28345
U RIO DE JANEIRO
919 895-6521

OBSTETRICS AND GYNECOLOGY

ASKARY, NASSER AGHA — OBG /END AC: 66 73 7
PO BOX 1715
ROCKINGHAM 28379
AHWAZ MED SCH
919 997-315

KHOSHNEVIS, PARVIZ — OBG AC: 66 73 8
PO BOX 1715
ROCKINGHAM 28379
U OF SHIRAZ
919 997-315

ORTHOPEDIC SURGERY

HOWELL, EDGAR VASTON, JR. — ORS AC: 56 56 8
400 E. WASHINGTON ST.
PO BOX 1148
ROCKINGHAM 28379
MED COLL OF GA
919 997-457

PEDIATRICS

AHDIEH, MASOUD — PD AC: 72 80 8
302 HYLAN AVENUE
HAMLET 28345
TABRIZ U
919 997-718

RADIOLOGY

STEVENSON, JOHN SAMUEL — R /NM AC: 67 67 7
926 BIGGS BOULEVARD
ROCKINGHAM 28379
BOWMAN GRAY
919 997-259

UROLOGICAL SURGERY

EL-DROUBI, HAZEM — U AC: 69 77 7
111 MALLARD LN.
ROCKINGHAM 28379
EIN SHAMS U
919 997-505

78. ROBESON COMPONENT SOCIETY

OFFICERS—**President:** Peter L. Villani, M.D., 33 Trinity Dr., Lumberton 28358 (919 738-8556)
Secretary: George W. Mozingo, III, M.D., 101 W. 27th St., Lumberton 28358 (919 738-7166)

ANESTHESIOLOGY

HARRIS, JOHN JOEL — AN AC: 84 85 89
2501 KENAN AVE.
LUMBERTON 28358
U OF TENNESSEE
919 738-8155

KARIM-JETHA, ZAHEER — AN AC: 80 82 86
202 EDINBOROUGH DR.
LUMBERTON 28358
CORNELL U
919 738-8154

CARDIOVASCULAR DISEASES

HEGDE, SADANANDA B. — CD /IM AC: 73 77 83
4384 FAYETTEVILLE RD.
LUMBERTON 28358
KASTURBA U
919 738-1141

DERMATOLOGY

HENDRICKS, ANDREW ADAM — D AC: 74 76 81
102 WEST 27TH STREET
LUMBERTON 28358
U OF VIRGINIA
919 738-7154

DIAGNOSTIC RADIOLOGY

BERNE, FREEMAN ALBERT — DR AC: 64 64 70
P. O. DRAWER 1527
LUMBERTON 28358
DUKE
919 738-8222

GASQUE, BOYD BENNETT, JR. — DR AC: 77 77 82
P. O. DRAWER 1527
LUMBERTON 28359
U OF NC
919 738-8222

EMERGENCY MEDICINE

DEESE, JOSEPH EARL — EM AC: 78 79 90
RT. #3, BOX 130-C
MAXTON 28364
U OF NC
919 738-6441

HELMS, VAN EDWARD — EM AC: 77 78 88
2504 ROWLAND AVE.
LUMBERTON 28358
U OF TENNESSEE
919 671-5032

FAMILY PRACTICE

BRADFORD, ARTHUR LOUIS — FP AC: 74 74 7
123 E. BROAD STREET
ST. PAULS 28384
HOWARD U
919 865-517

DECILLES, THOMAS A. — FP AC: 84 85 8
119 N. FLORENCE ST.
MAXTON 28364
CORNELL U
919 844-525

HA, KHIE SEM — FP AC: 68 76 7
229 S. MAIN STREET
RED SPRINGS 28377
NATL TAIWAN U
919 843-411

HARDIN, JAMES BENFORD — FP AC: 77 77 7
206 W. 28TH STREET
LUMBERTON 28358
U OF NC
919 739-816

HITTEL, GLENN PAUL — FP AC: 84 85 8
4112 VANN DR.
LUMBERTON 28358
MED COLL OF VA
919 628-671

†INMAN, CHARLES ERNEST — FP: 51 53 5
PO BOX 788
DECEASED--10-4-90
FAIRMONT 28340
DUKE
919 628 -7188

78. ROBESON COMPONENT SOCIETY (Continued)

OHNSON, CHARLES THOMAS, JR. FP AC
53 53 53
222 S. MAIN ST.
PO BOX 232
RED SPRINGS 28377 919 843-4576
JEFFERSON

OWNES, HOLLY EICHELBERGER FP AC
83 84 90
119 FLORENCE ST.
MAXTON 28364 919 844-5253
MEHARRY MED COLL

ICCORMICK, CAROLYN BRUMM FP AC
72 72 76
2606 N. ELM ST.
LUMBERTON 28358 919 738-3718
U OF IOWA

TUART, DENNIS O'GAREY FP AC
82 86 86
109 SHORT DR.
LUMBERTON 28358 919 628-6711
MED COLL OF VA

ENERAL PRACTICE

ROOKS, MARTIN LUTHER GP AC
57 58 80
711 HIGHWAY E.
P. O. BOX 37
PEMBROKE 28372 919 521-4221
U OF MICHIGAN

ODD, TIMOTHY ANDREW GP AC
84 84 90
123 N. SECOND ST.
ST. PAULS 28384 919 865-5114
U OF TENNESSEE

ENERAL SURGERY

AKER, HORACE MITCHELL,JR. GS L/RT
44 44 48
1901 N. ELM ST.
LUMBERTON 28358 919 738-8571
DUKE

RITT, SAMUEL EMERSON, II GS AC
80 80 79
295 W. 27TH ST.
LUMBERTON 28358 919 738-8556
BOWMAN GRAY

LARK, DOUGLAS HENDON GS L/RT
45 45 52
295 WEST 27TH STREET
LUMBERTON 28358 919 739-4615
U OF PENN

AWRENCE, JOHN CHARLES GS L/RT
50 57 57
P. O. BOX 1068
LUMBERTON 28358 919 738-8571
VANDERBILT U

ILLANI, PETER LOUIS GS /VS AC
72 73 82
33 TRINITY DRIVE
LUMBERTON 28358 919 738-8556
WEST VA U

WARD, D. E., JR. GS L
45 45 53
2604 N. ELM STREET
LUMBERTON 28358 919 738-4276
BOWMAN GRAY

WILLIAMSON, WARREN LIGON GS AC
66 66 74
295 WEST 27TH STREET
LUMBERTON 28358 919 738-8556
LA STATE U

YNECOLOGY

EDGPETH, WILLIAM CAREY GYN L/RT
34 33 36
P. O. BOX 1021
LUMBERTON 28358
NORTHWESTERN U

ROZIER, JOHN CHARLES, JR. GYN AC
67 67 76
206 W. 27TH STREET
LUMBERTON 28358 919 739-5550
BOWMAN GRAY

ITERNAL MEDICINE

ALEXANDER, JOSEPH BLACK IM RT
47 48 50
395 W. 27TH STREET
LUMBERTON 28358 919 739-7551
BOWMAN GRAY

BEASLEY, CHARLES RONALD IM /PUD AC
80 82 78
206 W. 27TH STREET
LUMBERTON 28358 919 738-1421
DUKE

DEVINE, GERARD MICHAEL IM AC
73 76 77
395 WEST 27TH STREET
LUMBERTON 28358 919 739-7551
DOWNSTATE ME CTR

HOEKSTRA, JOHN ARTHUR IM /AI AC
75 79 83
395 W. 27TH STREET
LUMBERTON 28358 919 739-7551
U OF ILLINOIS

LEE, HENRY NEILL, JR. IM AC
56 56 62
395 WEST 27TH STREET
LUMBERTON 28358 919 739-7551
U OF NC

LOWNES, ROBERT LEFONIA, SR. IM AC
73 75 90
202 DUART RD.
LUMBERTON 28358 919 671-5032
MEHARRY MED COLL

NETTLES, GEORGE STUEARD IM AC
63 63 71
2505 N. ELM STREET
LUMBERTON 28358 919 739-2854
MED U OF SC

PITTMAN, ALFRED ROWLAND, JR. IM L/RT
45 45 48
2803 KENAN AVE.
LUMBERTON 28358 919 739-3362
DUKE

RICHARDSON, DAVID LEE IM AC
74 77 74
395 WEST 27TH STREET
LUMBERTON 28358 919 739-7551
DUKE

OBSTETRICS AND GYNECOLOGY

BROWN, ERNEST HYDE, JR. OBG AC
57 57 63
4300 FAYETTEVILLE ROAD
LUMBERTON 28358 919 738-9601
U OF NC

CLAYTON, TAWANDA BOWDEN OBG AC
86 89 91
403 W. 27TH ST.
LUMBERTON 28358 919 739-2846
UNIV. OF NC

HARRIS, MARY BOGGS OBG AC
84 85 89
2501 KENAN
LUMBERTON 28358 919 738-9601
U OF TENNESSEE

HEPLER, JOHN DAVIS OBG AC
69 69 79
403 WEST 27TH STREET
LUMBERTON 28358 919 739-2846
U OF VIRGINIA

NEAL, WALTER ERNEST, JR. OBG AC
66 66 73
4300 FAYETTEVILLE RD.
LUMBERTON 28358 919 738-9601
MED COLL OF VA

OBSTETRICS

PARSONS, LACY JACK OBS L/RT
42 43 46
2204 ROWLAND AVENUE
LUMBERTON 28358 919 739-6431
NEW YORK U

OPHTHALMOLOGY

BAILEY, JOHN RICHARD OPH AC
62 69 70
205 W. 29TH STREET
LUMBERTON 28358 919 738-4856
MED U OF SC

FLEMING, CHRISTOPHER PAUL OPH AC
77 78 82
202 W. 28TH ST.
LUMBERTON 28358 919 739-0606
CASE WESTERN RES

ORTHOPEDIC SURGERY

DUNLAP, JACK ERWYN ORS AC
52 61 61
4320 FAYETTEVILLE ROAD
LUMBERTON 28358 919 739-0634
U OF TENNESSEE

FAX, JOHN NICHOLAS, JR. ORS AC
66 69 84
500 W. 27TH ST.
LUMBERTON 28358 919 739-4313
U OF OREGON

OTOLARYNGOLOGY

MCJILTON, ROY ALAN OTO AC
64 64 84
4303 LUDGATE ST.
LUMBERTON 28358 919 738-4226
ST LOUIS U

PSYCHIATRY

BARTELL, GARY DENNIS P AC
73 73 90
207 W. 29TH STREET
LUMBERTON 28358 919 738-5261
U OF CA-IRVINE

DOUGLAS, ARTHUR EUGENE, JR. P AC
59 59 65
4900 INDEPENDENCE BLVD. #28
LUMBERTON 28358 919 738-8230
U OF NC

JORDAN, BARBARA MOORE P AC
54 54 59
207 W. 29TH STREET
LUMBERTON 28358 919 738-5261
U OF NC

PEDIATRICS

ADAMS, WILLIAM CHAMBLISS PD AC
78 80 82
103 W. 27TH ST.
LUMBERTON 28358 919 739-3318
MED COLL OF VA

BEISCHEL, JEAN MARIE PD AC
86 89 89
103 W. 27TH ST.
LUMBERTON 28358 919 739-3318
U OF CINCINNATI

BELL, JOSEPH TYRON PD AC
86 89 89
103 W. 27TH ST.
LUMBERTON 28358 919 739-3318
U OF NC

BURKE, ANNETTE BLACKMON PD AC
78 79 83
4117 VANN DRIVE
LUMBERTON 28358 919 739-0243
BOWMAN GRAY

RYAN, WILLIAM SCOTT PD AC
73 74 85
103 W. 27TH ST.
LUMBERTON 28358 919 739-3318
U OF KANSAS

YOUNG, ROBERT LASSITER, JR. PD AC
61 61 66
103 WEST 27TH STREET
LUMBERTON 28358 919 739-3318
DUKE

PATHOLOGY, ANATOMICAL AND CLINICAL

ANDREWS, BOB BARCUS PTH AC
51 57 57
P. O. BOX 847
LUMBERTON 28359 919 671-5074
U OF KANSAS

THOMPSON, MARVIN WHITAKER PTH AC
62 62 67
P. O. BOX 847
LUMBERTON 28359 919 671-5074
BOWMAN GRAY

PULMONARY DISEASES

NAIK, SOMNATH PUD AC
75 76 83
4384 FAYETTEVILLE RD.
PO BOX 947
LUMBERTON 28358 919 738-1141
U OF BOMBAY

RADIOLOGY

BURKE, JOSEPH ANTHONY R AC
64 66 83
4117 VANN DRIVE
LUMBERTON 28358 919 276-2121
GEORGETOWN U

78. ROBESON COMPONENT SOCIETY (Continued)

HOFFMAN, CARL WHITE R AC 67 67 73
209 W. 27TH ST.
PO DRAWER 1527
LUMBERTON 28358 919 739-9788
BOWMAN GRAY

UROLOGICAL SURGERY

BURLESON, WILLIAM ROWELL U AC 64 64 71
101 WEST 27TH STREET
LUMBERTON 28358 919 738-7166
U OF NC

MOZINGO, GEORGE WM.,III U AC 76 77 87
101 W. 27TH ST.
LUMBERTON 28358 919 738-7166
MED U OF SC

STRAWCUTTER, HOWARD E. U /ADM AC 50 53 56
2002 N. ELM ST.
LUMBERTON 28358 919 739-6756
JEFFERSON

79. ROCKINGHAM COMPONENT SOCIETY

OFFICERS—**President:** R. Bruce Robillard, M.D., 518 S. Van Buren Rd., Eden 27288 (919 623-7033)
Secretary: M. I. Javaid, M.D., 515 Thompson St., Eden 27288 (919 623-8451)
Executive Secretary: Joan Garrison, 618 S. Main St., Reidsville 27320 (919 349-8461, ext. 230)

ANESTHESIOLOGY

GONZALEZ-CUNI, LUIS G. AN AC 83 87 88
618 S. MAIN ST.
REIDSVILLE 27320 919 349-8461
U OF MIAMI

DIAGNOSTIC RADIOLOGY

CALL, DAVID LEE DR AC 77 77 82
MOREHEAD MEM. HOSP.-RAD
EDEN 27288 919 623-9711
U OF NC

FAMILY PRACTICE

BAKER, HERBERT MARVIN FP AC 57 57 58
258 THE BOULEVARD ST.
EDEN 27288 919 627-1129
LOMA LINDA U

BEAVERS, CLARENCE HENRY FP C 85 86 91
520 S. VAN BUREN RD.
EDEN 27288 919 623-5171
WEST VA U

COUNCIL, ALBERT BARBEE, JR. FP AC 51 51 56
701 S. VAN BUREN ROAD
EDEN 27288 919 623-1514
BOWMAN GRAY

FORBES, THOMAS EARL FP L/RT 40 40 42
P. O. BOX 659
REIDSVILLE 27320 919 349-5324
JEFFERSON

HOWARD, KEVIN PRICE FP AC 82 83 86
520 VAN BUREN RD.
EDEN 27288 919 623-5171
WAYNE STATE U

KNOWLTON, STEPHEN D. FP AC 78 81 88
629 S. MAIN ST.
PO BOX 330
REIDSVILLE 27320 919 349-7114
TUFTS U

MABE, PAUL ALEXANDER, JR. FP AC 53 54 56
1123 S. MAIN STREET
REIDSVILLE 27320 919 342-4286
DUKE

MCINNIS, ANGUS GUY FP AC 57 57 63
1123 S. MAIN STREET
REIDSVILLE 27320 919 342-4286
DUKE

MOORE, DONALD WILSON FP AC 76 80 81
401 W. DECATUR ST.
MADISON 27025 919 548-9618
BOWMAN GRAY

REYNOLDS, ERNEST HAROLD FP L 35 35 36
P. O. BOX 330
REIDSVILLE 27320 919 342-2873
NEW YORK U

RICHARDSON, GEORGE IRVIN FP AC 55 55 58
P. O. BOX 1857
REIDSVILLE 27320 919 349-5040
U OF NC

SASSER, PAUL WM. FP AC 84 85 87
520 S. VAN BUREN RD.
EDEN 27288 919 623-5171
U OF NC

GENERAL PRACTICE

COX, ALEXANDER MCNEIL GP L/RT 32 32 38
325 S. MARKET STREET
MADISON 27025 919 548-2240
MED COLL OF VA

JOYCE, CHARLES WELDON GP AC 47 48 49
401 W. DECATUR ST.
MADISON 27025 919 548-9618
BOWMAN GRAY

GENERAL SURGERY

BRADFORD, WILLIAM STRONG GS AC 80 82 86
PO BOX 150
REIDSVILLE 27323 919 349-4024
UNPHU

DEMASON, MARC GS AC 78 80 84
515 THOMPSON ST., STE. B
EDEN 27288 919 623-9118
U OF MICHIGAN

DESTEFANO, NEIL MICHAEL GS /GYN AC 56 57 64
PO BOX 780
REIDSVILLE 27320 919 349-8484
NEW YORK MED COL

FLEISHMAN, HENRY ARNOLD GS /CD AC 74 75 80
515 THOMPSON ST., STE. B
EDEN 27288 919 623-9118
EMORY U

MORICLE, CHARLES HUNTER GS /ABS L/RT 39 39 42
1223 CRESCENT DR.
REIDSVILLE 27320 919 349-8590
U OF MARYLAND

INTERNAL MEDICINE

MARGOLIS, JEFFREY ALAN IM C 78 79 80
PO BOX 2036
EDEN 27288 919 627-4896
U OF NC

QURESHI, AYYAZ MAHMOOD IM /ON AC 75 75 85
505 N. THIRD AVE.
MAYODAN 27027 919 548-2456
DOW MED COLLEGE

REHMAN, NAJEEB UR IM AC 78 81 90
406 PIEDMONT ST.
REIDSVILLE 27320 919 342-6196
NISHTAR MED COLL

SACRINTY, NICHOLAS WILLIAM IM /GE AC 52 52 60
608 LINDEN DR.
EDEN 27288 919 623-9794
BOWMAN GRAY

YOUNG, CHARLES GIBSON IM /OM AC 53 54 56
403 W. HARRISON STREET
P. O. BOX 359
REIDSVILLE 27320 919 349-5536
DUKE

OBSTETRICS AND GYNECOLOGY

FERGUSON, JOHN V. OBG AC 79 80 88
512 MAPLE AVE.
REIDSVILLE 27320 919 342-6063
U OF NC

WOODWARD, ROBERT WARREN OBG AC 61 82 83
517 WOODROW ST.
PO BOX 448
REIDSVILLE 27320 919 342-6161
U OF CHICAGO

OPHTHALMOLOGY

HAINES, CARROLL FOGG, JR. OPH AC 78 82 84
515 THOMPSON ST., STE. A
EDEN 27288 919 627-527
HAHNEMANN

LEWIS, CHARLES PELL, JR. OPH /OTO L/RT 50 52 56
813 S. MAIN ST.
REIDSVILLE 27320 919 342-0588
DUKE

ORTHOPEDIC SURGERY

KEELING, J. WAYNE ORS AC 75 76 8
307 W. MOREHEAD STREET
REIDSVILLE 27320 919 342-611
MED COLL OF VA

OTOLARYNGOLOGY

ROBILLARD, ROBERT B. OTO AC 79 82 88
518 S. VAN BUREN RD.
EDEN 27288 919 623-703
AUTONOMA UNIV

PEDIATRICS

BALSLEY, ROBERT EUGENE PD L/RT 44 44 50
825 CRESCENT DRIVE
REIDSVILLE 27320 919 349-633
U OF VIRGINIA

PATHOLOGY, ANATOMICAL AND CLINICAL

BURKHART, CECIL ROBERT PTH /CLP AC 58 67 68
1006 OAKCREST DRIVE
REIDSVILLE 27320 919 349-846
U OF CINCINNATI

MACRI, ANTHONY JOHN PTH AC 62 63 7
424 DOGWOOD DR.
EDEN 27288 919 623-971
JEFFERSON

RADIOLOGY

NASH, CARL WILLIAM R AC 62 62 7
608 LINDEN DRIVE
EDEN 27288 919 623-971
U OF ARKANSAS

79. ROCKINGHAM COMPONENT SOCIETY (Continued)

RUSLOW, ROY EARL R L/RT
1706 PENNROSE DR. 45 45 53
REIDSVILLE 27320 919 349-5952
BOWMAN GRAY

UROLOGICAL SURGERY

JAVAID, MOHAMMAD IQBAL U AC
515 THOMPSON ST., STE. C 68 68 77
EDEN 27288 919 623-8451
KING EDWARD COLL

KRISHNAN, C. SETHU U AC
515 THOMPSON ST. STE. C 73 84 88
EDEN 27288 919 623-8451
M C-PONDICHERRY

80. ROWAN COMPONENT SOCIETY

FFICERS—**President:** Richard W. Martin, M.D., 327 Mocksville Ave., Salisbury 28144 (704 637-2750)
Secretary: Rachel Ross, M.D., Rowan Memorial Hospital, Salisbury 28144 (704 638-1000)

SPECIALTY LISTED

AYES, THOMAS PATRICK C
229 MOCKSVILLE AVE. 49 50 91
SALISBURY 28144 704 636-6432
U OF MICHIGAN

ESTHESIOLOGY

UMGARNER, JOHN HENRY AN AC
420 PRINCETON DR. 66 67 67
SALISBURY 28144 704 638-1000
MED COLL OF VA

STIS, CHRISTOPHER MORROW AN AC
221 BETHEL DR. 85 85 82
SALISBURY 28144 704 638-1000
EAST CAROLINA U

IANNON, WILLIAM GARY AN AC
5020 OLD MOCKSVILLE RD. 72 72 75
SALISBURY 28144 704 637-3599
BOWMAN GRAY

RMATOLOGY

ALSH, CARLE DOUGLAS D L/RT
400 AVINGER LN., STE. 330 31 31 56
DAVIDSON 28036 704 636-2466
COLUMBIA U

EBB, WILLIAM WHITAKER, JR. D AC
PO BOX 2145 71 71 79
400-C MOCKSVILLE AVE.
SALISBURY 28145 704 636-0971
U OF NC

GNOSTIC RADIOLOGY

OOTEN, WAYNE BROWN DR AC
401 MOCKSVILLE AVE., STE. 201 74 74 78
SALISBURY 28144 704 633-1023
BOWMAN GRAY

ERGENCY MEDICINE

KOWRONEK, DAVID GORDON EM /ORS AC
350 SPICEWOOD LANE 74 74 79
SALISBURY 28144 704 638-1035
BOWMAN GRAY

MILY PRACTICE

ARR, JOHN FINDLEY FP AC
CLEVELAND FAMILY PRACTICE 80 81 86
PO BOX 310
CLEVELAND 27013 704 278-4053
HAHNEMANN

LOUNT, JOHN MYERS, III FP /OM AC
130 WOODSON ST. 60 60 62
SALISBURY 28144 704 637-3207
U OF NC

ODINGER, CHARLES FREDERICK FP SR
900 SPENCER AVE. 55 55 57
SPENCER 28159 704 636-1720
U OF NC

ELLIS, CHARLES ROBERT FP AC
702 HIGHLAND AVE. 82 84 86
PO BOX 8106
LANDIS 28088 704 857-0137
BOWMAN GRAY

EVERHART, GEORGE RAYMOND, III FP AC
201 WOODSON AVE. 77 78 89
SALISBURY 28144 704 637-3373
BOWMAN GRAY

FARRINGTON, CECIL MURRAY, JR. FP AC
401 MOCKSVILLE AVE. 72 72 77
SALISBURY 28144 704 637-1123
U OF NC

FEEZOR, CHARLES NOEL FP L
PO BOX 4236 37 37 40
SALISBURY 28144 704 633-1787
TEMPLE U

FIELD, BOB LEWIS FP L
1239 W. HENDERSON ST. 31 31 39
SALISBURY 28144 704 636-0732
MED COLL OF VA

LOMAX, DONALD HENRY FP AC
1710 W. INNES ST. 51 51 55
KETNER CENTER
SALISBURY 28144 704 636-5626
BOWMAN GRAY

LOMBARD, R. ELIZABETH FP AC
P. O. BOX 457 53 54 54
ROCKWELL 28138 704 279-7227
LOMA LINDA U

NICKERSON, LLOYD EMERY FP AC
516 MOCKSVILLE AVE. 86 89 89
SALISBURY 28144 704 633-7070
ORAL ROBERTS U

OLIVER, JOSEPH ANDREW FP L
P. O. BOX 458 33 34 37
ROCKWELL 28138 704 279-7227
LOMA LINDA U

RENDLEMAN, DAVID ATWELL, JR. FP L
P. O. BOX 4327 44 44 48
SALISBURY 28144 704 633-0844
EMORY U

SCOTT, ALAN FULTON FP L/RT
P. O. BOX 63 43 43 47
SALISBURY 28144 704 636-5431
U OF PENN

SPARGO, JOHN PRICHARD FP AC
P. O. BOX 278 55 55 59
COOLEEMEE 27014 704 284-2331
BOWMAN GRAY

WHICKER, WINFRY EVANS FP AC
P. O. BOX 595 63 63 66
CHINA GROVE 28023 704 857-1108
BOWMAN GRAY

WRIGHT, RICHARD BRANDON, JR. FP /AN L/RT
902 WILTSHIRE VILLAGE 42 42 47
SALISBURY 28144 704 636-1602
TULANE U

GASTROENTEROLOGY

MURPHY, THOMAS LYNCH GE /GE L/RT
409 MOCKSVILLE AVE. 43 43 54
SALISBURY 28144 704 633-8780
HARVARD

GENERAL PRACTICE

GULYN, ANNA BAUHOFER GP AC
117 PINETREE ROAD 57 62 74
SALISBURY 28144 704 638-9000
U OF INNSBRUCK

NEWMAN, HAROLD HASTINGS, JR. GP/OM L/RT
9 OAK RD. 45 45 48
SALISBURY 28144 704 633-7070
JOHNS HOPKINS

SHINN, GEORGE CLYDE GP L
111 N. MAIN STREET 33 33 40
CHINA GROVE 28023 704 857-7098
U OF MARYLAND

SLOOP, NORMAN RAY GP AC
310 STATESVILLE BOULEVARD 59 59 62
SALISBURY 28144 704 636-5326
BOWMAN GRAY

GENERAL SURGERY

BLACK, KYLE EMERSON GS L
ONE ACORN LANE 38 41 46
SALISBURY 28144 704 636-5510
U OF MICHIGAN

BURKE, ANTHONY LEE GS AC
709 BARKER ST. 82 83 91
SALISBURY 28144 704 633-3441
WEST VA U

BUSBY, MERLE RUDY GS AC
901 W. HENDERSON STREET 70 70 79
SALISBURY 28144 704 633-1581
DUKE

HOLT, CHARLES RICHARD GS /EM AC
17 CAMELOT RD., KINGS FOREST 52 57 80
SALISBURY 28144 704 637-7504
BOSTON U

MARTIN, RICHARD W. GS AC
327 MOCKSVILLE AVE. 57 66 67
PO BOX 1665
SALISBURY 28144 704 637-2750
CORNELL U

MCKENZIE, EDWARD BURT GS L/RT
709 BARKER STREET 51 56 57
SALISBURY 28144 704 633-3441
U OF ROCHESTER

NEWMAN, LEON BRYANT GS AC
327 MOCKSVILLE AVE. 84 84 89
SALISBURY 28144 704 637-2750
U OF ALABAMA

PARROTT, FRANK STRONG GS L/RT
P. O. BOX 637 43 43 54
SALISBURY 28144 704 633-4627
U OF MARYLAND

SHANNON, GORDON J. GS /VS AC
1601 BRENNER AVE. 61 62 88
SALISBURY 28144 704 638-9000
U OF MIAMI

SPENCER, ALLEN GS /GYN AC
820 W. HENDERSON STREET 54 54 60
SALISBURY 28144 704 633-2883
U OF NC

GYNECOLOGY

GREEN, PAUL, JR. GYN AC
315 G MOCKSVILLE AVE. 51 56 58
SALISBURY 28144 704 638-0023
DUKE

80. ROWAN COMPONENT SOCIETY (Continued)

INTERNAL MEDICINE

AGNER, ROY AUGUSTA, JR. IM AC
611 MOCKSVILLE AVENUE 51 52 55
SALISBURY 28144 704 633-7220
DUKE

AGNER, ROY CHRISTOPHER IM AC
611 MOCKSVILLE AVENUE 75 77 79
SALISBURY 28144 704 636-9820
DUKE

FINK, GARY LEE IM /EM AC
BROWN ST., P. O. BOX 610 83 83 82
FAITH 28041 704 279-8329
U OF NC

GINN, THOMAS MOSS IM AC
319 MOCKSVILLE AVE. 75 75 73
SALISBURY 28144 704 637-3538
BOWMAN GRAY

GISH, LARRY MORGAN IM AC
611 MOCKSVILLE AVENUE 64 64 72
SALISBURY 28144 704 633-7220
BOWMAN GRAY

GOSS, FREDERICK UHL IM AC
611 MOCKSVILLE AVE. 80 81 77
SALISBURY 28144 704 633-7220
U OF NC

HINSON, JAMES NOAH IM AC
102 MOCKSVILLE AVE., STE. 204 60 60 71
SALISBURY 28144 704 633-3136
BOWMAN GRAY

MARSH, FRANK BAKER IM L/RT
725 LAKE DRIVE 19 20 22
SALISBURY 28144 704 633-2344
JEFFERSON

PROCTOR, STEPHEN DUANE IM /PUD AC
611 MOCKSVILLE AVE. 84 84 90
SALISBURY 28144 704 633-7220
BOWMAN GRAY

SHAFER, FRANK TYACK IM AC
P. O. BOX 2129 51 51 52
SALISBURY 28144 704 636-1826
BOWMAN GRAY

SMITH, DAVID NIMMONS IM /CD AC
102 MOCKSVILLE AVE., STE. 103 66 66 67
SALISBURY 28144 704 636-6632
BOWMAN GRAY

SPENCER, FREDERICK BRUNELL, JR IM L/RT
803 CONFEDERATE AVE. 45 45 48
SALISBURY 28144 704 636-5016
MED COLL OF VA

THOMPSON, WILLARD C.,III IM AC
116 RUTHERFORD ST. 81 81 87
SALISBURY 28144 704 633-2732
BOWMAN GRAY

WARD, DEMMING MORTON IM AC
319 MOCKSVILLE AVENUE 74 74 80
SALISBURY 28144 704 637-3538
BOWMAN GRAY

OBSTETRICS AND GYNECOLOGY

GOODWIN, JOEL SEXTON OBG AC
412 RICHMOND ROAD 59 59 68
SALISBURY 28144 704 636-9270
U OF NC

HALL, BAHNSON DAVID OBG AC
315 MOCKSVILLE AVENUE 74 74 81
SALISBURY 28144 704 636-9270
BOWMAN GRAY

HALL, JOSEPH CULLEN OBG L/RT
305 STUART DRIVE 42 42 48
SALISBURY 28144 704 633-9508
VANDERBILT U

PARADA, MALCOLM PERRY OBG AC
315 MOCKSVILLE AVENUE 64 64 71
SALISBURY 28144 704 636-9270
U OF CINCINNATI

THURSTON, THOMAS GARDINER, III OBG AC
315 MOCKSVILLE AVENUE 68 68 76
SALISBURY 28144 704 636-9270
DUKE

OPHTHALMOLOGY

CRAWFORD, JOHN ROBERT, III OPH AC
310 N. MAIN STREET 66 66 71
SALISBURY 28144 704 633-7542
U OF NC

JACKSON, JOSEPH ALEXANDER, III OPH AC
800 W. CEMETERY STREET 66 67 73
SALISBURY 28144 704 633-0345
U OF FLORIDA

REYNOLDS, JOHN OZMENT, JR. OPH AC
410 MOCKSVILLE AVE. 71 71 76
SALISBURY 28144 704 637-0158
U OF NC

ORTHOPEDIC SURGERY

LOCKERT, CHARLES RAY ORS AC
102 MOCKSVILLE AVENUE 62 66 69
SALISBURY 28144 704 638-0616
VANDERBILT U

MASON, WILLIAM TERRY ORS AC
400 MOCKSVILLE AVENUE 66 66 76
SALISBURY 28144 704 633-6044
U OF MARYLAND

STEELE, ROBERT GIBSON ORS AC
400 MOCKSVILLE AVENUE 73 74 78
SALISBURY 28144 704 633-6442
EMORY U

WATTS, HUGH BOYD ORS AC
130 MOCKSVILLE AVE. 62 62 71
SALISBURY 28144 704 637-8770
U OF TENNESSEE

OTOLARYNGOLOGY

REYNOLDS, JAMES W., JR. OTO /A AC
826 W. HENDERSON STREET 64 64 72
SALISBURY 28144 704 633-8276
U OF NC

THOMPSON, WILLARD RAY OTO AC
102 MOCKSVILLE AVENUE 69 69 77
SALISBURY 28144 704 637-3344
MED COLL OF VA

PSYCHIATRY

GULYN, BOHDAN EMANUEL P /GP RT
117 PINETREE ROAD 40 40 75
SALISBURY 28144 704 633-7770
U OF WIEN

LAMM, LEROY BARDEN P AC
P. O. BOX 427 46 46 77
ROCKWELL 28138 704 279-7034
BOWMAN GRAY

MCCABE, JAMES MICHAEL P /N AC
102 MOCKSVILLE AVE. 79 81 81
SALISBURY 28144 704 636-5997
U OF NAVARRA

NETI, SASTRY VISHWANATHA P AC
VA MEDICAL CENTER 71 74 90
SALISBURY 28144 704 638-9000
M C-PONDICHERRY

PEDIATRICS

BACHL, FREDERICK JOSEPH PD AC
720 GROVE STREET 64 67 74
SALISBURY 28144 704 636-5576
TUFTS U

BAILEY, HILDA HART PD AC
102 MOCKSVILLE AVENUE 45 46 47
SALISBURY 28144 704 633-3727
U OF PENN

CARLTON, THOMAS KERN, JR. PD AC
720 GROVE STREET 63 63 72
SALISBURY 28144 704 636-5576
DUKE

CORPENING, JOSEPH DURHAM PD AC
720 GROVE STREET 52 54 56
SALISBURY 28144 704 636-5576
DUKE

KOONTZ, WAYNE CARSON PD AC
720 GROVE STREET 64 64 6
SALISBURY 28144 704 636-557
BOWMAN GRAY

TANNEHILL, ROBERT BRUCE PD AC
720 GROVE STREET 59 62 6
SALISBURY 28144 704 636-557
MED COLL OF GA

PLASTIC SURGERY

COCHRAN, W. GERALD PS AC
410 MOCKSVILLE AVE. 67 68 8
SALISBURY 28144 704 633-856
TEMPLE U

PATHOLOGY, ANATOMICAL AND CLINICAL

MAYRAND, ELIZABETH PTH
508 PLYMOUTH AVE. 45 64 6
SALISBURY 28144 704 638-107
U OF ILLINOIS

POTTS, RONALD SARGENT PTH AC
115 WAVERLY CIRCLE 54 59 8
SALISBURY 28144 704 633-776
MCGILL U

RADIOLOGY

DULA, FREDERICK MAST, JR. R AC
401 MOCKSVILLE AVE., STE. 100 81 82 7
SALISBURY 28144 704 633-102
U OF NC

THURSTON, THOMAS GARDINER, II R /NM
P.O. DRAWER 2608 41 41 4
SALISBURY 28144 704 636-084
HARVARD

WEAR, JOHN EDMUND R L/R
113 PINE TREE RD. 46 52 5
SALISBURY 28144 704 633-102
NORTHWESTERN U

RADIATION ONCOLOGY

HAYES, THOMAS PATRICK RO
229 MOCKSVILLE AVE.
SALISBURY 28144 704 636-643

THERAPEUTIC RADIOLOGY

WOLFSON, SORRELL L. TR A
2425 JAKE ALEXANDER BLVD., N 54 54 5
SALISBURY 28144 704 636-643
VANDERBILT U

UROLOGICAL SURGERY

BERTRAM, ROBERT U A
909 W. HENDERSON ST. 80 80 8
SALISBURY 28144 704 633-94
U OF KENTUCKY

CLINE, WAYNE ALLEN U L/R
909 W. HENDERSON STREET 46 47
SALISBURY 28144 704 633-94
BOWMAN GRAY

CLINE, WAYNE ALLEN, JR. U A
909 W. HENDERSON STREET 76 76
SALISBURY 28144 704 633-94
BOWMAN GRAY

ERB, NORRIS SCRIBNER U L/R
8 OAK ROAD 44 46
SALISBURY 28144 704 633-24
MED COLL OF VA

ROBERTSON, LLOYD HARVEY, JR. U R
3035 LEONARD RD. 60 60
SALISBIRY 28146 704 633-94
DUKE

81. RUTHERFORD COMPONENT SOCIETY

OFFICERS—**President:** Douglas D. Sheets, M.D., P.O. Box 1208, Rutherfordton 28139 (704 287-7383)
Secretary: Jim Van Jura, M.D., P.O. Box 1407, Rutherfordton 28139 (704 286-2302)

LLERGY

IYDE, AUSTIN TABER — A AC
NORRIS-BIGGS CLI — 51 54 57
RUTHERFORDTON 28139 — 704 286-9036
U. OF VIRGINIA

IESTHESIOLOGY

IRKPATRICK, JAMES L., III — AN AC
RUTHERFORD HOSPITAL — 84 86 88
DEPT. OF ANESTHESIA
RUTHERFORDTON 28139 — 704 286-5421
MED COLL OF GA

AGNOSTIC RADIOLOGY

ESHER, DONALD TICE — DR AC
909 N. WASHINGTON STREET — 76 76 81
RUTHERFORDTON 28139 — 704 286-5233
U OF TENNESSEE

IOORING, FRANKLIN J. — DR AC
PO BOX 886 — 84 87 88
RUTHERFORDTON 28139 — 704 287-2984
EAST CAROLINA U

ELF, JERRY LEE — DR AC
217 WEST 2ND ST. — 77 77 75
RUTHERFORDTON 28139 — 704 287-2984
U OF NC

MILY PRACTICE

AMES, CHARLES NEWTON — FP AC
P. O. BOX 518 — 67 68 69
CAROLEEN 28019 — 704 657-5371
MED COLL OF VA

AWRENCE, ROBERT S. — FP AC
313 PINE STREET — 75 75 86
RUTHERFORDTON 28139 — 704 286-2302
MED U OF SC

ITCHELL, LANDIS PATTERSON — FP L
113 W. MAIN ST. — 38 38 40
SPINDALE 28160 — 704 286-2391
WASHINGTON U

ADFORD, HOWARD LEE — FP L/RT
2249 BBRISBAYNE CIR. — 54 54 56
RALEIGH 27615 — 704 657-5221
BOWMAN GRAY

/INKER, GUYTON JOEL — FP C
206 RESERVATION DR. — 84 85 89
SPINDALE 28160
BOWMAN GRAY

/INKER, NANCY C. — FP AC
135 HONEYSUCKLE DR. — 86 87 89
RUTHERFORDTON 28139 — 704 286-0506
BOWMAN GRAY

GASTROENTEROLOGY

JASKI, THOMAS JOHN — GE /IM AC
RUTHERFORD INTERNAL MED. ASSOC — 67 67 74
PO BOX 390
RUTHERFORDTON 28139 — 704 286-9036
ST LOUIS U

GENERAL PRACTICE

BECKNELL, GEORGE FRANKLIN, JR. — GP AC
407 S. BROADWAY — 51 52 53
FOREST CITY 28043 — 704 245-4838
MED U OF SC

ELIZONDO, MERCEDITAS O. — GP /PTH AC
20 N. MAIN STREET — 64 77 82
CLIFFSIDE 28024 — 704 657-9742
CEBU INST OF MED

MOSS, GEORGE OREN — GP /PH L/RT
ROUTE #1, BOX 397JJ — 27 28 29
BOSTIC 28018 — 704 245-2853
EMORY U

GENERAL SURGERY

TANNER, KENNETH SPENCER, JR. — GS L/RT
PO BOX 468 — 43 47 48
RUTHERFORDTON 28139 — 704 286-9036
HARVARD

INTERNAL MEDICINE

HARDING, ROBERT WILLIAM — IM AC
NORRIS-BIGGS CLINIC — 64 65 71
RUTHERFORDTON 28139
ST U OF NY-BUFF

MEBANE, JOHN GILMER — IM L/RT
P. O. BOX 1405 — 41 48 49
RUTHERFORDTON 28139 — 704 287-3515
HARVARD

SHAPIRO, WILLIAM HARTMAN — IM /CD AC
RUTHERFORD INT. MED. ASSOC. — 61 61 69
312 S. RIDGECREST AVE., BOX 390
RUTHERFORDTON 28139 — 704 286-9036
OHIO STATE U

WHITWORTH, CLAUDE PHILLIP — IM AC
312 S. RIDGECREST — 79 81 85
RUTHERFORDTON 28139 — 704 286-9036
U OF NC

OBSTETRICS AND GYNECOLOGY

HUGHES, JOE DON — OBG AC
P. O. BOX 1208 — 59 64 65
RUTHERFORDTON 28139 — 704 287-7383
U OF TEXAS

SHEETS, DOUGLAS DEAN — OBG AC
TRYON RD., PO BOX 1208 — 74 74 81
RUTHERFORDTON 28139 — 704 287-7383
INDIANA U

WINKER, JOEL EDWARD — OBG AC
P. O. BOX 1208 — 63 64 73
RUTHERFORDTON 28139 — 704 287-7383
CORNELL U

ORTHOPEDIC SURGERY

ROGERS, HOBART RAY — ORS /HS AC
103 LANE DR. — 63 63 72
RUTHERFORDTON 28139 — 704 286-4298
BOWMAN GRAY

OTOLARYNGOLOGY

DEFREITAS, JUNIOR — OTO AC
121 TRYON ROAD — 84 85 89
RUTHERFORDTON 28139 — 704 286-0632
TEMPLE U

PSYCHIATRY

CARTER, JOHN JEFFERSON, JR. — P /CHP AC
CITY RT. #3, 311 FAIRGROUND RD — 75 76 85
SPINDALE 28160 — 704 287-6110
U OF ALABAMA

PEDIATRICS

ARCHER, WILLIS — PD AC
117 TRYON RD. — 66 66 89
RUTHERFORDTON 28139 — 704 286-9049
U OF NC

MARSTON, CHARLES THOMAS, JR. — PD AC
117 TRYON ROAD — 78 81 76
RUTHERFORDTON 28139 — 704 286-9049
U OF NC

PATHOLOGY

WHEELER, MICHAEL STEVENS — PTH AC
101 COUNTRY WOODS DR. — 77 79 75
RUTHERFORDTON 28139 — 704 286-5121
U OF NC

RADIOLOGY

MOORING, STEWART LEE — R /NM DE
RUTHERFORD HOSPITAL — 55 55 62
RUTHERFORDTON 28139 — 704 286-5232
U OF NC

UROLOGICAL SURGERY

POWELL, WILLIAM STEWART — U AC
117 TRYON RD., STE. B — 78 78 90
RUTHERFORDTON 28139 — 704 286-1445
U OF MISSISSIPPI

82. SAMPSON COMPONENT SOCIETY

OFFICERS—**President:** Bruce F. Caldwell, M.D., P.O. Box 1006, Clinton 28328 (919 592-8511)
Secretary: John L. Rouse, III, M.D., 403 Fairview St., Clinton 28328 (919 592-6011)

ERMATOLOGY

URRATT, JOHN PEELER — D AC
603 BEAMON ST. — 71 71 78
CLINTON 28328 — 919 592-5583
U OF NC

EMERGENCY MEDICINE

CALDWELL, BRUCE FRANCIS — EM /GS AC
P. O. BOX 1006 — 63 63 70
CLINTON 28328 — 919 592-8511
U OF NC

DAMBECK, ALLYN BENARD — EM AC
312 FOX LAKE DRIVE — 54 56 78
CLINTON 28328 — 919 592-8511
U OF VERMONT

SUMPIO, BERNARDO D. — EM /IM AC
209 FOX LAKE DRIVE — 54 77 77
CLINTON 28328 — 919 592-8847
MANILA CENTRAL U

82. SAMPSON COMPONENT SOCIETY (Continued)

FAMILY PRACTICE

AYERS, JAMES SALISBURY — FP L/RT
113 FINCH ST. — 32 32 37
CLINTON 28328 — 919 592-2541
JEFFERSON

JONES, CARL H., III — FP AC
403 FAIRVIEW ST. — 73 74 88
CLINTON 28328 — 919 592-6011
MED U OF SC

LEAK, FRANK WALTER — FP AC
CLINTON MEDICAL CLINIC — 67 67 70
CLINTON 28328 — 919 592-6011
U OF NC

NANCE, JOHN WESLEY — FP L
403 FAIRVIEW STREET — 48 49 52
CLINTON 28328 — 919 592-6011
BOWMAN GRAY

NEWTON, JOHN THOMAS — FP AC
403 FAIRVIEW ST. — 81 82 78
CLINTON 28328 — 919 592-6011
U OF NC

NIFONG, TED JAMES — FP AC
403 FAIRVIEW ST. — 87 88 91
CLINTON 28328 — 919 592-6011
BOWMAN GRAY

PEAK, LATHAM CONRAD — FP AC
ROSEBORO MEDICAL CLINIC — 51 51 56
ROSEBORO 28382 — 919 525-5055
BOWMAN GRAY

ROUSE, JOHN LAWRENCE, III — FP AC
403 FAIRVIEW ST. — 73 73 77
CLINTON 28328 — 919 592-6011
BOWMAN GRAY

SMITH, JOHN BRASWELL, JR. — FP AC
403 FAIRVIEW STREET — 77 77 80
CLINTON 28328 — 919 592-6011
U OF NC

GENERAL PRACTICE

FAJARDO, AGAPITO LACSON — GP AC
407 BEAMAN ST. — 71 75 77
CLINTON 28328 — 919 592-1462
U OF SANTO TOMAS

KENDALL, JOHN HAROLD — GP L
715 STEWART AVENUE — 35 35 35
CLINTON 28328 — 919 592-2161
LOMA LINDA U

ROYAL, DONNIE MARTIN — GP L
BOX 156 — 26 26 28
SALEMBURG 28385 — 919 525-4538
MED COLL OF VA

GENERAL SURGERY

HOWARD, JOSEPH COOPER, JR. — GS L/RT
403 COHARIE DR. — 42 42 47
CLINTON 28328 — 919 592-3388
TEMPLE U

REITER, RICHARD MARTIN — GS AC
603 BEAMON ST. — 70 75 87
CLINTON 28328 — 919 592-8711
HOWARD U

INTERNAL MEDICINE

CARNEY, RODERIC GRIFFIN — IM C
407 BEAMAN STREET — 78 80 91
CLINTON 28328 — 919 592-1776
AUTONOMA UNIV

CARR, HENRY JAMES, JR. — IM /PUD AC
PO BOX 857 — 54 54 62
CLINTON 28328 — 919 592-2964
DUKE

DEGREGORIO, PETER ANTHONY — IM AC
603 BEAMAN ST. — 69 70 90
CLINTON 28328 — 919 592-1915
COLUMBIA U

OWENS, WILLIAM LAWRENCE — IM AC
WOODSIDE PROF. BLDG. — 61 61 68
CLINTON 28328 — 919 592-4605
U OF NC

SIY-HIAN, BIENVENIDO CHAN — IM /CD AC
RT. #6, BOX 553 — 71 76 78
CLINTON 28328
U OF EAST

VISER, PAUL EDWARD — IM AC
603 BEAMAN ST. — 84 85 85
WOODSIDE PROF. BLDG.
CLINTON 28328 — 919 765-4131
U OF NC

OBSTETRICS AND GYNECOLOGY

FRYAR, MEL WEBSTER — OBG AC
400 COOPER DR. — 81 84 89
CLINTON 28328 — 919 592-1414
BOWMAN GRAY

ROBERTS, JOHN MILTON, JR. — OBG AC
400 COOPER DRIVE — 74 74 81
CLINTON 28328 — 919 592-1414
BOWMAN GRAY

OPHTHALMOLOGY

WOODS, THOMAS J. CROFFORD — OPH /FP AC
WOODSIDE PROF. BLDG. — 74 74 82
CLINTON 28328 — 919 592-7860
U OF MISSISSIPPI

ORTHOPEDIC SURGERY

THOMAS, JOSEPH RAKER — ORS AC
603 BEAMAN ST. — 73 74 89
CLINTON 28328 — 919 592-1233
JEFFERSON

YOUNG, RICHARD L. — ORS AC
603 BEAMAN ST. — 79 79 8
CLINTON 28328 — 919 592-500
MED U OF SC

PEDIATRICS

CARR, WILLIAM C. — PD AC
115 VISTA DR. — 84 87 8
CLINTON 28328 — 919 592-601
DUKE

EHRLICHMAN, GLORIA SOTOMAYOR — PD AC
603 BEAMAN STREET — 55 56 7
CLINTON 28328 — 919 592-771
U OF PUERTO RICO

HERRING, RUFUS MCPHAIL, JR. — PD AC
403 FAIRVIEW STREET — 69 69 7
CLINTON 28328 — 919 592-601
BOWMAN GRAY

PATHOLOGY, ANATOMICAL AND CLINICAL

BARR, FALVY CARL, JR. — PTH /FOP AC
404 BUTLER DRIVE — 72 75 8
CLINTON 28328 — 919 592-851
LA STATE U

RADIOLOGY

GINTHNER, TERRY P. — R AC
PO BOX 739 — 78 78 8
CLINTON 28328 — 919 592-807
INDIANA U

GOBIEN, ROLF PETER — R AC
PO BOX 739 — 71 71 8
409-C COOPER DR.
CLINTON 28328 — 919 592-807
U OF VERMONT

UROLOGICAL SURGERY

HUBBARD, HAMPTON — U AC
WOODSIDE PROF. BLDG. — 47 47 7
CLINTON 28328 — 919 592-712
MED COLL OF VA

SCARFF, JOHN EDWIN, JR. — U /GS AC
603 BEAMAN ST. — 63 63 8
CLINTON 28328 — 919 592-712
BOWMAN GRAY

83. SCOTLAND COMPONENT SOCIETY

OFFICERS—**President:** Fred H. Mabry, Jr., M.D., 418 King St., Laurinburg 28352 (919 276-7570)
Secretary: James M. Currin, Jr., M.D., 515 Lauchwood Dr., Laurinburg 28352 (919 276-1340)

ANESTHESIOLOGY

PATEL, URVASHI B. — AN AC
311 MONTROSE LN. — 81 84 87
LAURINBURG 28352 — 919 276-9390
LADY HARDINGE

EMERGENCY MEDICINE

MCCASKILL, LLOYD CURTIS — EM /FP AC
P. O. BOX 788 — 55 55 57
MAXTON 28364 — 919 276-2121
U OF NC

FAMILY PRACTICE

CURRIN, JAMES MITCHELL, JR. — FP AC
515 LAUCHWOOD DRIVE — 77 77 81
LAURINBURG 28352 — 919 276-1340
BOWMAN GRAY

FAULKENBERRY, BRADFORD K. — FP AC
500-A LAUCHWOOD DR. — 81 84 88
LAURINBURG 28352 — 919 276-2439
MED U OF SC

McARN, HUGH MUNROE JR. — FP AC
422 KING ST. — 53 53 56
LAURINBURG 28352 — 919 276-2100
DUKE

GENERAL SURGERY

MATTSON, MARK WARREN — GS A
PO BOX 1808 — 77 78 8
LAURINBURG 28353 — 919 276-354
NORTHWESTERN U

MITCHENER, JAMES SAMUEL, JR. — GS A
P. O. BOX 1808 — 47 47 5
LAURINBURG 28353 — 919 276-354
JOHNS HOPKINS

83. SCOTLAND COMPONENT SOCIETY (Continued)

INTERNAL MEDICINE

BALL, FRANK JERVEY, JR. — IM AC 76 78 81
601 LAUCHWOOD DR.
LAURINBURG 28352 — 919 276-7727
MED U OF SC

NEPHROLOGY

NESTOR, Z. JONATHAN — NEP /IM AC 83 85 89
PO BOX 526
LAURINBURG 28352 — 919 276-7727
WAYNE STATE U

OBSTETRICS AND GYNECOLOGY

LOUK, DOUGLAS K. — OBG AC 84 86 88
507 W. COVINGTON ST.
PO BOX 1808
LAURINBURG 28352 — 919 276-4432
EASTERN VA

MCKEITHEN, MURDOCH RITCHIE — OBG AC 53 53 56
P. O. BOX 1808
LAURINBURG 28353 — 919 276-4432
WASHINGTON U

TATUM, BEN SULLIVAN — OBG AC 59 60 67
P. O. BOX 1599
LAURINBURG 28353 — 919 276-4432
MED U OF SC

WILLITTS, BRUCE KIRBY — OBG AC 56 56 79
P. O. BOX 1808
LAURINBURG 28353 — 919 276-4432
CASE WESTERN RES

ORTHOPEDIC SURGERY

CARTER, RALPH EDWARD, III — ORS AC 80 82 90
1604 MEDICAL DR.
LAURINBURG 28352 — 919 276-4611
BOWMAN GRAY

RODGERS, THEODORE YOUNG, III — ORS AC 52 53 78
507 W. COVINGTON STREET
PO BOX 1808
LAURINBURG 28353 — 919 276-3541
NEW YORK MED COL

RUSH, PAUL F. — ORS AC 82 83 87
913 ANGUS DR.
LAURINBURG 28352 — 919 276-4611
UNIV. OF S.C.

PEDIATRICS

DENNIS, KENNETH MICHAEL — PD /ADL AC 74 77 78
418 KING ST.
LAURINBURG 28352 — 704 627-9226
U OF FLORIDA

MABRY, FREDERICK HARRISON, JR. — PD AC 77 77 75
418 KING STREET
LAURINBURG 28352 — 919 276-7570
U OF NC

PURCELL, WILLIAM ROBERT — PD AC 56 56 61
418 KING STREET
LAURINBURG 28352 — 919 276-7570
U OF NC

SMITHWICK, JAMES DAVID — PD AC 70 70 78
ROUTE #3, BOX 238-B
LAURINBURG 28352 — 919 276-7570
U OF NC

UROLOGICAL SURGERY

FRENCH, THOMAS NASH — U AC 66 66 75
LAURINBURG SURGICAL CLI.
PO BOX 1808
LAURINBURG 28353 — 919 276-3541
U OF NC

KARAMALEGOS, ANTONIOS Z. — U AC 83 84 89
521 LAUCHWOOD DR.
LAURINBURG 28352 — 919 277-8636
MICHIGAN ST U

VASCULAR SURGERY

MAYDA, JARO, II — VS AC 79 83 89
521 LAUCHWOOD DR.
LAURINBURG 28352 — 919 277-8002
U OF PUERTO RICO

84. STANLY COMPONENT SOCIETY

OFFICERS—**President:** Paul Pastorini, M.D., P.O. Box 460, Albemarle 28002 (704 982-5150)
Secretary: L. N. Cabugwason, M.D., P.O. Box 726, Norwood 28128 (704 474-3171)

FAMILY PRACTICE

GASKIN, JOHN STOVER, JR. — FP AC 59 59 61
210 W. MAIN ST.
PO BOX 189
LOCUST 28097 — 704 888-6156
DUKE

JOHNSEN, ERIC MERRIMAN — FP AC 77 78 80
1007 N. 6TH ST.
ALBEMARLE 28001 — 704 983-3121
WAYNE STATE U

JOLLY, WILLIAM OSCAR, III — FP AC 63 63 67
305 YADKIN ST.
ALBEMARLE 28001 — 704 983-7900
U OF NC

KELLEY, THOMAS FRANCIS — FP L 46 49 50
460 N. 10TH ST.
ALBEMARLE 28001 — 704 982-9144
DUKE

LACROIX, CAROL ANN — FP AC 80 80 81
320 YADKIN STREET
ALBEMARLE 28001 — 704 982-9144
WRIGHT STATE U

LILES, RICHARD VERNON, JR. — FP AC 57 57 62
320 YADKIN STREET
ALBEMARLE 28001 — 704 982-9144
U OF NC

LYKINS, KIMBERLY GLENN — FP AC 86 87 90
320 YADKIN ST.
ALBEMARLE 28001 — 704 982-9144
KIRKSVILLE OSTEO

MILTON, BERNARD GERALD — FP AC 73 73 89
123 W. THIRD ST.
OAKBORO 28129 — 704 983-4590
U OF MARYLAND

ROSS, WILLIS RICHARD — FP AC 52 53 53
320 YADKIN STREET
ALBEMARLE 28001 — 704 982-9144
MED U OF SC

SELTZER, STEPHEN CHARLES — FP AC 74 75 79
320 YADKIN ST.
ALBEMARLE 28001 — 704 982-9144
U OF IOWA

GENERAL PRACTICE

CABUGWASON, LUCILA NOVAL — GP AC 63 78 80
28 N. MAIN ST.
PO BOX 726
NORWOOD 28128 — 704 474-3171
CEBU INST OF MED

HILL, WILLIAM HENRY — GP L 44 44 46
124 E. NORTH ST.
ALBEMARLE 28001 — 704 982-5812
BOWMAN GRAY

MCKENZIE, WAYLAND NASH — GP L 35 35 37
P. O. BOX 248
ALBEMARLE 28002 — 704 982-3312
MED COLL OF VA

GENERAL SURGERY

ALLEN, BENJAMIN GRAY — GS AC 80 81 89
PO BOX 1398
ALBEMARLE 28002 — 704 982-0161
BOWMAN GRAY

FREEMAN, WILLIAM HARRISON — GS L/RT 44 44 47
P. O. DRAWER 1398
ALBEMARLE 28001 — 704 982-0161
BOWMAN GRAY

SMITH, WHITMAN ERSKINE, JR. — GS /VS AC 57 57 64
P. O. BOX 1398
ALBEMARLE 28001 — 704 982-0161
DUKE

STIBAL, DARLENE MAY — GS AC 80 86 89
303-C YADKIN ST.
ALBEMARLE 28001 — 704 983-3500
SOU IL MED SCH

INTERNAL MEDICINE

EDDINS, GEORGE EDGAR, JR. — IM /CD L/RT 45 51 51
24859 NORWOOD RD.
ALBEMARLE 28801 — 704 982-2127
CORNELL U

GREEN, FRANCIS WEATHERLY — IM AC 56 56 64
1009 N. 6TH ST.
ALBEMARLE 28001 — 704 982-8169
U OF NC

KANDL, LOUIS CHARLES — IM /GER AC 72 72 81
331 N. FIRST ST.
ALBEMARLE 28001 — 704 982-2189
HAHNEMANN

LEFLER, RUFUS STAMEY, III — IM /CD AC 78 78 75
214 E. NORTH STREET
ALBEMARLE 28001 — 704 982-1136
BOWMAN GRAY

MEHTA, NALIN CHIMANLAL — IM /ON AC 70 75 82
815 N. THIRD ST.
ALBEMARLE 28001 — 704 983-3508
B J MED COLL

OBSTETRICS AND GYNECOLOGY

FORT, WILKINSON DAVIS — OBG AC 60 64 64
1000 N. FIFTH STREET
ALBEMARLE 28001 — 704 982-8112
U OF TENNESSEE

GAITHER, ROBERT HUTH — OBG AC 64 64 72
1000 N. FIFTH STREET
ALBEMARLE 28001 — 704 982-8112
GEO WASHINGTON U

HERRING, JOHN HARVARD — OBG AC 58 68 68
1000 N. FIFTH STREET
ALBEMARLE 28001 — 704 982-8112
U OF TENNESSEE

OPHTHALMOLOGY

JENKINS, LARRY PARKER — OPH AC 64 64 73
121 YADKIN STREET
ALBEMARLE 28001 — 704 983-1102
U OF TENNESSEE

84. STANLY COMPONENT SOCIETY (Continued)

ORTHOPEDIC SURGERY

COYLE, ALICE REGINA — ORS AC 85 87 90
PO BOX 1636
313 YADKIN ST.
ALBEMARLE 28002
HAHNEMANN

MAC, SURENDRAPAL SINGH — ORS /HS AC 70 75 80
P. O. BOX 1230
ALBEMARLE 28001
MAHATMA GANDHI
704 983-3314

OTOLARYNGOLOGY

MURRAY, JOHN P. — OTO AC 66 66 86
PO BOX 819
ALBEMARLE 28001
WASHINGTON U
704 983-6950

PEDIATRICS

BALLENGER, CLAUDE NEWTON, JR. — PD RT 54 59 60
EP PO BOX 1427
ALBEMARLE 28002
U OF VIRGINIA
704 982-2133

WILLIAMSON, LINDA J. — PD AC 85 86 87
PO BOX 2183
ALBEMARLE 28002
BOWMAN GRAY
919 282-2764

PHYSICAL MEDICINE AND REHABILITATION

MAC, HARJIT BALA — PM AC 72 70 84
P. O. BOX 1230
ALBEMARLE 28002
B J MED COLL
704 983-3314

PATHOLOGY, ANATOMICAL AND CLINICAL

WALLACE, JOHN MORRIS — PTH AC 59 61 64
P. O. BOX 1489
ALBEMARLE 28001
MED U OF SC
704 982-0148

RADIOLOGY

MANGUM, ADDISON GOODLOE — R AC 58 58 67
P. O. BOX 1258
ALBEMARLE 28002
U OF NC
704 982-5319

UROLOGICAL SURGERY

PASTORINI, PAUL R. — U AC 81 86 89
303 YADKIN ST.
ALBEMARLE 28001
DOWNSTATE ME CTR

86. SURRY-YADKIN COMPONENT SOCIETY

OFFICERS—**President:** Mark Appler, M.D., 1006 Old Rockford St., Mount Airy 27030 (919 786-9088)
Secretary: Talluri Balaji, M.D., 705 S. South St., Mt. Airy 27030 (919 786-5144)

ANESTHESIOLOGY

RIDGWAY, ALTON H. — AN /FP AC 42 43 84
RFD #3, BOX 34-I
EAST BEND 27018
INDIANA U
919 699-8283

CARDIOVASCULAR DISEASES

BRITT, TILMAN CARLISLE, JR. — CD /IM L/RT 47 48 52
216 GRACE STREET
MOUNT AIRY 27030
BOWMAN GRAY
919 786-5745

DIAGNOSTIC RADIOLOGY

CROWE, JAMES EARL — DR AC 66 66 73
2915 BITTING RD.
WINSTON-SALEM 27104
BOWMAN GRAY
919 789-9541

EMERGENCY MEDICINE

GRIFFIN, ADRIAN MARK — EM /P AC 77 77 74
PO BOX 1623
913 WORTH ST.
MOUNT AIRY 27030
BOWMAN GRAY
919 786-2001

STABLER, CAREY VASTINE — EM /IM AC 62 62 74
NORTHERN HOSP.-SURRY CO.
MOUNT AIRY 27030
U OF ARKANSAS
919 789-9541

FAMILY PRACTICE

ATHAR, MOHAMMED A. — FP AC 65 77 88
146 RENFRO ST.
MT. AIRY 27030
OSMANIA MED COLL

EVERHART, CARLTON DHU — FP AC 58 58 61
911 WORTH ST.
MOUNT AIRY 27030
BOWMAN GRAY
919 786-5108

GOODSON, BRUCE MICHAEL — FP AC 85 87 90
213 JACKSON ST., BOX 1729
YADKINVILLE 27055
AMER U CARIBBEAN
919 679-7570

HALL, JAMES GRAYSON — FP AC 57 57 63
P. O. BOX 158
DOBSON 27017
U OF NC
919 386-8270

JARRELL, WILBURN ERIC — FP AC 54 56 58
2007 SALEM ROAD
MOUNT AIRY 27030
U OF VIRGINIA
919 786-5050

MCNEILL, CLAUDE ACKLE, JR. — FP L/RT 43 43 48
248 DUTCHMAN CREEK RD.
ELKIN 28621
BOWMAN GRAY
919 835-2345

STUART, HAL MARTIN — FP AC 56 56 61
180-C PARKWOOD DRIVE
ELKIN 28621
BOWMAN GRAY
919 835-3613

SYKES, CHARLES LOUIS — FP /IM L 38 38 39
P. O. BOX 590
MOUNT AIRY 27030
GEORGETOWN U
919 786-6105

TAYLOR, VERNON WILLIAMS, JR. — FP L 38 38 41
815 N. BRIDGE STREET
ELKIN 28621
JEFFERSON
919 835-3425

GASTROENTEROLOGY

APPLER, MARK LEE — GE /IM AC 80 81 80
1006 OLD ROCKFORD ST.
MT. AIRY 27030
BOWMAN GRAY
919 786-9088

GENERAL PRACTICE

COOKE, RALPH MCBRIDE — GP /GER L/RT 40 40 47
631 ELK SPUR ST.
ELKIN 28621
U OF LOUISVILLE
919 835-5544

HALL, JOHN MOIR — GP L/RT 42 47 47
357 IVY CIRCLE
ELKIN 28621
U OF VIRGINIA
919 835-4534

WOOD, WILLIAM LUPTON, SR. — GP L/RT 45 45 47
P. O. BOX 367
YADKINVILLE 27055
BOWMAN GRAY
919 679-8689

GENERAL SURGERY

COLLINS, CHARLES DAVID — GS AC 74 76 84
1008 OLD ROCKFORD ST.
MOUNT AIRY 27030
U OF NC
919 786-9430

CROWE, JOHN ALBERT, JR — GS AC 67 68 74
HOOTS MEM. HOSPITAL
BOX 68
YADKINVILLE 27055
MED COLL OF GA
919 689-3111

HALL, LOCKSLEY S. — GS AC 59 59 61
L.C. HOOTS MEMORIAL HOSPITAL
YADKINVILLE 27055
BOWMAN GRAY
919 679-2041

HUGHES, CARLISLE BEE, JR. — GS L/RT 40 40 52
RT. 2, BOX 567
YADKINVILLE 27055
MED COLL OF VA
919 679-8285

JACKSON, DAVID DEWITT — GS /CDS AC 73 73 79
P. O. BOX 191
MOUNT AIRY 27030
BOWMAN GRAY
919 789-9176

JACKSON, RICHARD DEWITT — GS L/RT 45 46 56
1067 GREENHILL ROAD
MOUNT AIRY 27030
TEMPLE U
919 786-2400

LAWRENCE, BENJAMIN JONES, JR. — GS/PS L/RT 47 47 48
813 ROCKFORD ST.
PO BOX 72
MOUNT AIRY 27030
JEFFERSON
919 786-7871

LEVINE, MAX PHILLIP — GS /CDS AC 68 70 90
180 N. PARKWOOD MED. CTR.
ELKIN 28621
CHICAGO MED SCH
919 835-7600

INTERNAL MEDICINE

BOKESCH, CHARLES RICHARD — IM /CD AC 73 74 78
P. O. BOX 1547
MOUNT AIRY 27030
EMORY U
919 786-6146

KERLEY, ROGER KENNY — IM AC 79 80 84
917 WORTH ST.
PO BOX 985
MOUNT AIRY 27030
U OF NC
919 789-7833

PORCHEY, CARL JOSEPH, JR. — IM AC 72 74 76
PO BOX 68
YADKINVILLE 27055
WASHINGTON U
919 768-4730

OBSTETRICS AND GYNECOLOGY

GITT, KENNETH DARYL — OBG AC 80 84 85
PO BOX 1408
MOUNT AIRY 27030
U OF NEBRASKA
919 786-4522

TURRENTINE, JOHN E. — OBG AC 79 79 90
180-R PARKWOOD DR.
ELKIN 28621
MED COLL OF GA
704 526-2225

86. SURRY-YADKIN COMPONENT SOCIETY (Continued)

VAUGHN, TOM JIMISON, JR. OBG AC 75 78 85
PO BOX 1408
MOUNT AIRY 27030 919 786-4522
U OF VIRGINIA

RTHOPEDIC SURGERY

BURKE, JAMES GILLUM ORS AC 73 74 79
414 W. LEBANON STREET
P. O. BOX 1544
MOUNT AIRY 27030 919 789-9041
EMORY U

UBLIC HEALTH

SIMMONS, JIMMIE DALE PH /FP AC 57 57 61
SURRY COUNTY HEALTH DEPT.
PO BOX 1062
DOBSON 27017 919 386-9400
BOWMAN GRAY

PATHOLOGY, ANATOMICAL AND CLINICAL

DUDLEY, CHARLES COUNCIL, JR. PTH /FP RT 55 55 59
320 IVY CIRCLE
ELKIN 28621 919 835-2931
U OF NC

SMITH, ROBERT LEE PTH AC 64 64 74
320 ROBIN ROAD
MOUNT AIRY 27030 919 789-9710
U OF VIRGINIA

RADIOLOGY

MERLO, RICHARD BARTLETT R /NM AC 61 61 67
773 BROOKWOOD DRIVE
ELKIN 28621 919 835-3722
DUKE

UROLOGICAL SURGERY

BALAJI, TALLURI U AC 72 82 88
708 S. SOUTH ST.
MOUNT AIRY 27030 919 786-5144
OSMANIA MED COLL

FENCL, RAYMOND JOHN U AC 69 71 87
180-0 PARKWOOD
ELKIN 28621 919 526-2000
U OF ILLINOIS

87. SWAIN COMPONENT SOCIETY

OFFICERS—**President:** Don Hartsfield, M.D., P.O. Box 427, Bryson City 28713 (704 488-8678)
Secretary: David Zimmerman, M.D., 4 New Montana Rd., Bryson City 28713 (704 488-6181)

FAMILY PRACTICE

HARTSFIELD, DONALD W. FP AC 86 86 89
BOX 427
BRYSON CITY 28713 704 488-2283
DES MOINES OST

MATHIESEN, KENNETH MARLIN FP /A L 38 38 39
960 PLATEAU ST.
BRYSON CITY 28713 704 488-6844
LOMA LINDA U

STEWART, JIMMIE V. FP AC 68 69 89
RT. #1, BOX 378H
SYLVA 28779 704 497-9163
U OF TEXAS

GENERAL SURGERY

MITCHELL, WILLIAM E. GS /GP AC 45 50 50
P. O. BOX 760
BRYSON CITY 28713 704 488-2283
U OF TENNESSEE

88. TRANSYLVANIA COMPONENT SOCIETY

OFFICERS—**President:** Samuel I. Brandt, M.D., P.O. Box 548, Rosman 28772 (704 884-6040)
Secretary: Dana Christianson, M.D., Medical Park Dr., Bldg. #2, Brevard 28712 (704 884-7320)
Executive Secretary: Linda S. White, PO Box 1116, Brevard 28712 (704 884-9111, ext. 317)

NESTHESIOLOGY

MAKWANA, GIRISH N. AN AC 78 82 89
107 GLEN CANNON DR.
PISGAH FOREST 28768 704 884-9111
BARODA U

AMILY PRACTICE

DUVALL, PAUL BRANDON FP AC 80 80 77
NEWLAND MED. BLDG.
GALLIMORE ROAD
BREVARD 28712 704 884-9030
U OF NC

FOLGER, JOHN RUSSELL, JR. FP /PH AC 53 53 57
101 WATER OAK SUITES
BREVARD 28712 704 966-9633
BOWMAN GRAY

NEWLAND, CHARLES LOGAN FP L/RT 27 28 32
104 WOODSIDE DR.
BREVARD 28712 704 883-2156
MED COLL OF VA

SANDERS, JAMES HENRY, JR. FP /GER AC 51 52 53
BLD #1, MEDICAL PARK DR.
BREVARD 28712 704 884-9362
MED U OF SC

TYSON, JAMES WILLIAM FP AC 66 68 70
NEWLAND MEDICAL BUILDING
BREVARD 28712 704 884-9030
U OF TEXAS

GENERAL SURGERY

HENDEL, ROBERT CHARLES GS AC 72 73 85
MEDICAL PARK DR., BLDG #1
BREVARD 28712 704 884-2198
U OF CONNECTICUT

WELLS, MARIUS HUGHEY GS AC 52 53 59
NEWLAND MED. BLDG.
11 GALLIMORE RD.
BREVARD 28712 704 884-9030
MED U OF SC

INTERNAL MEDICINE

DUNKELBERG, RAY HAMILTON IM /NEP AC 67 67 76
NEWLAND MED. BLDG.
BREVARD 28712 704 884-9030
MED U OF SC

LEFLER, CHARLES IM AC 70 70 85
BLDG. #2, MEDICAL PARK DR.
BREVARD 28782 704 884-4134
U OF NC

OBSTETRICS AND GYNECOLOGY

HAWK, ROBERT JOE OBG AC 65 65 79
1220 ASHEVILLE HIGHWAY
BREVARD 28712 704 883-8115
EMORY U

OCCUPATIONAL MEDICINE

GASQUE, MAC ROY OM /PH L 44 47 47
5 FORTUNE COVE RD.
BREVARD 28712 704 884-2503
U OF VIRGINIA

OPHTHALMOLOGY

CHRISTIANSON, DANA J. OPH AC 81 85 87
LOOKING GLASS EYE CTR.
BLDG. #2, MEDICAL PARK DR.
BREVARD 28712 704 884-7320
VANDERBILT U

SECOSAN, CRAIG JOHN OPH AC 81 82 86
#2 MEDICAL PARK DR.
BREVARD 28712 704 884-7320
WASHINGTON U

90. UNION COMPONENT SOCIETY

OFFICERS—**President:** Erwin R. Elber, M.D., 1501 E. Franklin St., Monroe 28110 (704 289-9410)
Secretary: Paul N. Erckman, M.D., 1307-B E. Franklin St., Monroe 28110 (704 289-2556)

ANESTHESIOLOGY

GREENBERG, WILLIAM ROGER — AN AC
71 71 83
P. O. BOX 2188
MONROE 28110
704 289-3247
U OF TEXAS

DERMATOLOGY

WALDMAN, GARY DAVID — D AC
77 78 83
1307 E. FRANKLIN ST.
MONROE 28110
704 289-9448
RUSH MED COLL

FAMILY PRACTICE

COOK, DONALD EUGENE, JR. — FP AC
81 83 84
808 CIRCLE DR.
UNION FAMILY PRACTICE, PA
MONROE 28112
704 289-5443
BOWMAN GRAY

DESKINS, WILLIAM CYPHERS — FP AC
62 62 66
1420 E. FRANKLIN ST.
MONROE 28110
704 289-8427
BOWMAN GRAY

KITCHIN, ALVIN PAUL, JR. — FP AC
62 62 67
1420 E. FRANKLIN ST.
MONROE 28110
704 289-8724
BOWMAN GRAY

OLEEN, GEORGE GERHARD — FP /ADM L
39 39 48
2715 PAGELAND HIGHWAY
PO BOX 973
MONROE 28112
704 283-5562
U OF KANSAS

STEWART, FRANCIS ASBURY — FP AC
55 55 56
102 E. MARSHVILLE BLVD.
MARSHVILLE 28103
704 624-5889
U OF NC

TAYLOR, JIMMY LYNN — FP AC
62 62 66
1420 E. FRANKLIN ST.
MONROE 28110
704 283-1521
BOWMAN GRAY

UHLAN, JANET LEE — FP C
86 86 90
808 CIRCLE DRIVE
MONROE 28112
U OF VIRGINA

GENERAL PRACTICE

GREENE, JOSEPH ELMO — GP /OM L
49 61 62
303 OLD HIGHWAY 74
MARSHVILLE 28103
704 624-6688
MED COLL OF GA

GREENE, PHILLIP — GP AC
82 82 86
613 E. ROOSEVELT BLVD.
MONROE 28110
704 283-8193
MED U OF SC

GENERAL SURGERY

BARRINGER, PHIL LOUIS — GS L
42 42 46
P. O. BOX 968
MONROE 28110
704 283-2738
JEFFERSON

BOWER, EDWARD BIRCH — GS AC
70 71 77
900-A E. SUNSET DR.
MONROE 28112
704 289-2561
JEFFERSON

IPAPO, VIRGILIO SORIANO — GS /VS AC
71 71 86
1309 E. FRANKLIN ST.
MONROE 28112
704 289-3024
U OF SANTO TOMAS

LEE, FRANCIS BROWN — GS L/RT
43 51 52
501 S. CHURCH ST.
PO BOX 457
MONROE 28110
704 283-4363
MED COLL OF VA

SALVAGGIO, MARK ANTHONY — GS /VS AC
80 80 86
900-A E. SUNSET DR.
MONROE 28112
704 289-2561
HAHNEMANN

GYNECOLOGY

EVANS, DAVID ARNOLD — GYN AC
67 67 72
1408 E. FRANKLIN ST.
MONROE 28110
704 289-2553
U OF NC

JEWELL, GARY WELCH — GYN AC
71 74 77
1408 FRANKLIN STREET
MONROE 28110
704 289-2553
U OF LOUISVILLE

INTERNAL MEDICINE

HARTNESS, JOHN FREDERICK, JR. — IM /EM AC
70 70 80
1307 DOVE STREET
MONROE 28110
704 289-6474
U OF NC

SNYDER, ALEXANDER BENJAMIN — IM AC
65 65 77
1420 E. FRANKLIN ST.
MONROE 28110
704 289-8427
ALBANY MED COLL

OBSTETRICS AND GYNECOLOGY

FRANCIS-LANE, MILLICENT A. — OBG AC
77 77 89
1303 DOVE ST.
MONROE 28110
704 289-8129
U OF FLORIDA

ORMAND, THOMAN LANE — OBG AC
58 58 64
1408 E. FRANKLIN ST.
MONROE 28110
704 289-2553
U OF NC

OPHTHALMOLOGY

AUSTIN, ROBERT GRAY, JR. — OPH AC
70 70 77
1410 FRANKLIN ST., EAST
MONROE 28110
704 289-5458
BOWMAN GRAY

ORTHOPEDIC SURGERY

ABDA, SANDRA MARIE — ORS AC
73 74 79
701 ROOSEVELT BLVD. BLDG 600
MONROE 28110
704 289-4598
MED COLL OF PENN

KING, JOSEPH JOHN, JR. — ORS AC
73 73 84
701 ROOSEVELT BLVD., BLDG.600
MONROE 28110
704 289-4598
JEFFERSON

OTOLARYNGOLOGY

ELBER, ERWIN RICHARD — OTO AC
69 70 79
1501 E. FRANKLIN STREET
MONROE 28110
704 289-9415
TUFTS U

PSYCHIATRY

MACDONALD, DONALD EWAN — P AC
48 53 54
1623 E. SUNSET DR.
MONROE 28110
704 289-5431
U OF ST ANDREWS

PEDIATRICS

ERCKMAN, PAUL NEFF — PD AC
63 63 69
MONROE CHILDREN'S CENTER, PA
1307-B E. FRANKLIN ST.
MONROE 28110
704 289-2556
MED COLL OF GA

TAYLOR, RICHARD ALLEN — PD RT
69 69 74
1112 MARTHA DR.
MONROE 28112
704 283-1880
BOWMAN GRAY

UROLOGICAL SURGERY

SOWDEN, RICHARD GUY — U AC
70 72 79
1503 E. FRANKLIN STREET
MONROE 28110
704 289-5402
JEFFERSON

91. VANCE COMPONENT SOCIETY

OFFICERS—**President:** Michael Smith, M.D., Vance Medical Arts Building, Henderson 27536 (919 438-2070)
Secretary: Steven H. Dennis, M.D., Vance Med. Arts Bldg., Henderson 27536 (919 492-9720)

ANESTHESIOLOGY

KO, YOUNG HWAN — AN AC
68 68 84
1801 SURIN CREEK RD., STE. 106
HENDERSON 27536
919 492-4579
CHUN NAM U

DERMATOLOGY

MEADOR, PHILIP D., JR. — D AC
71 71 86
MEDICAL SERVICE BLDG.
RUIN CREEK ROAD
HENDERSON 27536
919 492-2123
U OF NC

FAMILY PRACTICE

DRAKE, WILTON RODWELL, JR. — FP AC
72 72 76
VANCE MEDICAL ARTS CENTER
HENDERSON 27536
919 492-3152
U OF NC

GREEN, JAMES PRESTON — FP AC
55 59 65
176 BECKFORD DRIVE
HENDERSON 27536
919 492-2161
MEHARRY MED COLL

MAYO, JOSEPH DIXON, JR. — FP L/RT
49 49 50
949 MEADOW LANE
HENDERSON 27536
919 438-3155
U OF PENN

MILLS, JOHN FRANKLIN — FP AC
82 84 85
RUIN CREEK ROAD
HENDERSON 27536
919 492-3152
BOWMAN GRAY

MILLS, RANDOLPH DENNIS — FP AC
51 51 52
RUIN CREEK RD.
MEDICAL ARTS CTR.
HENDERSON 27536
919 492-3152
BOWMAN GRAY

TUCKER, GEORGE REGINALD, JR. — FP AC
55 55 59
RUIN CREEK RD. STE. A
HENDERSON 27536
919 492-3152
U OF NC

91. VANCE COMPONENT SOCIETY (Continued)

TUCKER, WILLIAM BEVERLY FP AC
66 66 71
RUIN CREEK ROAD
HENDERSON 27536 919 492-3152
U OF NC

WESTER, MILLARD WINSTON, JR. FP L/RT
52 52 54
2111 COLEMAN PL.
HENDERSON 27536 919 438-7284
DUKE

GENERAL PRACTICE

ROLLINS, CHARLES DICK GP L
35 35 39
507 GRANITE STREET
HENDERSON 27536 919 438-7263
U OF PENN

GENERAL SURGERY

PETROU, HOMER DONALD GS AC
58 58 75
1912 RUIN CREEK RD., STE. 108
HENDERSON 27536 919 438-5755
U OF CINCINNATI

SMITH, BERNARD MICHAEL GS /VS AC
74 76 86
VANCE MEDICAL ARTS BLDG.
RUIN CREEK ROAD
HENDERSON 27536 919 438-2070
U OF KENTUCKY

TYNER, MICHAEL ANTHONY GS AC
83 84 90
1912 RUIN CREEK RD.
HENDERSON 27536 919 438-2070
MED U OF SC

GYNECOLOGY

PARHAM, SUMNER MALONE GYN /OBS L/RT
45 45 52
973 MEADOW LANE
HENDERSON 27536 919 438-3751
U OF MARYLAND

INTERNAL MEDICINE

BURWELL, WALTER BRODIE IM L
41 45 46
317 ORANGE STREET
HENDERSON 27536 919 438-5619
TULANE U

REDDY, PUTLUR RAMACHANDRA IM /ON AC
62 72 77
MEDICAL ARTS BUILDING
RUIN CREEK ROAD
HENDERSON 27536 919 492-6127
OSMANIA MED COLL

SELLERS, GLADSTONE A. IM AC
84 10 88
542 W. RIDGEWAY ST.
WARRENTON 27589 919 257-3141
EMORY U

TORRES-HECKER, LUZVIMINDA IM AC
71 74 88
542 W. RIDGEWAY ST.
WARRENTON 27589 919 257-3141
U OF PHILIPPINES

OBSTETRICS AND GYNECOLOGY

CALLAHAN, JOSEPH BRODHEAD OBG AC
68 75 76
MEDICAL ARTS BUILDING
HENDERSON 27536 919 492-8576
U OF PITTSBURGH

GOODWIN, JAMES OSCAR OBG AC
70 70 76
MEDICAL ARTS BUILDING
RUIN CREEK ROAD
HENDERSON 27536 919 492-8576
U OF NC

MCCASKILL, SAMUEL GAULT, JR. OBG AC
73 73 84
RUIN CREEK ROAD
HENDERSON 27536 919 492-8576
BAYLOR

OPHTHALMOLOGY

BERNSTEIN, DANIEL OPH AC
68 69 77
1924 RUIN CREEK RD. STE. 204
HENDERSON 27536 919 492-8021
WAYNE STATE U

HAMPTON, CYNTHIA ANNE OPH AC
85 89 90
1924 RUIN CREEK RD. STE. 204
HENDERSON 27536 919 492-8021
U OF TX-HOUSTON

HOLT, THOMAS OPH /OTO L
38 38 48
209 FAIRVIEW STREET
WARRENTON 27589 919 257-3746
MED COLL OF VA

ORTHOPEDIC SURGERY

KAPLOWITZ, GARY L. ORS AC
78 79 84
RUIN CREEK ROAD
MEDICAL SERVICE BLDG.
HENDERSON 27536 919 438-3186
AUTONOMA UNIV

OTOLARYNGOLOGY

DENNIS, STEVEN HENRY OTO AC
81 82 88
VANCE MEDICAL ARTS BLDG.
HENDERSON 27536 919 492-9720
U OF NC

PEDIATRICS

CATHCART, CORNELIUS FITZHAROLD PD
76 76 83
1924 RUIN CREEK RD., STE. 101
HENDERSON 27536 919 492-9565
U OF NC

PATHOLOGY, ANATOMICAL AND CLINICAL

JONES, HARVEY MICHAEL PTH /CLP AC
66 66 76
1001 PARK AVE.
HENDERSON 28536 919 492-4477
WASHINGTON U

RADIOLOGY

BOYD, JOSEPH ALSTON, JR. R L/RT
45 46 52
1909 PARKER LANE
HENDERSON 27536 919 438-4645
MED COLL OF VA

UROLOGICAL SURGERY

VIJAYA, LINGA U AC
61 61 77
1801 RUIN CREEK RD., STE. 121
HENDERSON 27536 919 492-8711
ANDHIA MED COLL

92. WAKE COMPONENT SOCIETY

OFFICERS—**President:** Edward B. Yellig, M.D., 3320 Wake Forest Rd., Raleigh 27609 (919 872-4852)
Secretary: Henry A. Unger, Jr., M.D., 101 S.W. Cary Parkway, Cary 27511 (919 467-3203)
Executive Secretary: Annette S. Boutwell, P.O. Box 10387, Raleigh 27605 (919 821-2227)

NO SPECIALTY LISTED

FERRELL, WM. GREGORY C
85 86 87
3117 AGECROFT RD.
RALEIGH 27608 919 782-3456
BOWMAN GRAY

MOORE, GLENNDALE AC
79 79 90
PO BOX 28510
RALEIGH 27611 919 828-3466
U OF NC

ADOLESCENT MEDICINE

DURFEE, MICHAEL FULK ADL /PD AC
63 63 78
WAKE TEEN MEDICAL SERVICES
619 OBERLIN RD.
RALEIGH 27605 919 828-0035
U OF VIRGINIA

ANESTHESIOLOGY

BOLDING, WILLIAM ROBERT AN AC
81 83 80
2032 THORPSHIRE DR.
RALEIGH 27609 919 755-8000
U OF NC

BOSSE, HELEN HALL AN L/RT
50 53 55
1419 SPRINGMOOR CIR.
RALEIGH 27615 919 779-0777
MED COLL OF VA

COFFER, BERTRAM WATTS AN AC
69 69 76
P.O. BOX 18139
2800 BLUE RIDGE RD. STE. 204
RALEIGH 27619 919 781-7420
U OF NC

DANIEL, WALTER EUGENE AN AC
79 79 76
312 BUNCOMBE STREET
RALEIGH 27609 919 832-7988
U OF NC

DELEON, ROSEMARY ESPINO AN AC
61 61 78
2903 ADRIAN COURT
RALEIGH 27604 919 829-9550
FAR EASTERN U

EDMONDSON, DONALD AUSBON AN AC
85 86 90
PO BOX 18139
RALEIGH 27619 919 783-3034
U OF NC

EFIRD, RANDY CLYDE AN AC
85 86 88
PO BOX 18139
RALEIGH 27619 919 783-3034
BOWMAN GRAY

GASKIN, LEWIS JAMES AN AC
58 61 61
P. O. BOX 18139
RALEIGH 27619 919 781-7420
EMORY U

GERTSCH, RALPH C. AN C
85 86 90
2800 BLUE RIDGE RD.,STE. 204
RALEIGH 27619 919 781-7420
TEXAS TECH U

GORE, RONALD GENE AN AC
79 82 90
PO BOX 18139
RALEIGH ANESTHESIA ASSOC. INC.
RALEIGH 27619 919 781-7420
HARVARD

HAYNES, LAWRENCE BOWMAN AN AC
61 61 70
1205 KERSHAW DR.
RALEIGH 27609 919 782-2009
U OF TENNESSEE

HENRICK, WILLIAM ROBERT AN /CC AC
71 72 80
RALEIGH ANES. ASSOCIATES
P. O. BOX 18139
RALEIGH 27619 919 781-7420
JEFFERSON

HOELLERICH, VINCENT L. AN /CCM AC
83 84 88
PO BOX 18139
RALEIGH 27619 919 783-3034
U OF NEBRASKA

92. WAKE COMPONENT SOCIETY (Continued)

JACOBSON, ROBERT CARL AN AC
P. O. BOX 18139 79 84 85
RALEIGH 27619 919 783-3034
GEORGETOWN U

KING, JAMES LEROY AN AC
5420 DEER FOREST TRAIL 58 58 62
RALEIGH 27614 919 676-0222
BOWMAN GRAY

KIRK, CHARLES DAYTON AN AC
RALEIGH ANESTHESIA ASSOC. 69 69 77
P. O. BOX 18139
RALEIGH 27619 919 781-7420
U OF NC

LANNING, CHARLES FREDRIC AN AC
14208 ALLISON DR. 69 70 74
RALEIGH 27615 919 832-7988
U OF KANSAS

MACCIOLI, GERALD A. AN /CCM AC
2800 BLUE RIDGE RD. STE. 204 84 85 88
RALEIGH 27607 919 783-3034
U OF NEVADA

MASON, ERIC W. AN /CC AC
PO BOX 18139 80 81 85
RALEIGH 27619 919 783-3034
U OF MIAMI

MODROW, PETER ALBERT AN /P AC
805 FAULKNER PLACE 65 66 72
RALEIGH 27609 919 876-0581
U OF NC

NICHOLSON, CHARLES H. AN AC
PO BOX 18139 82 83 86
RALEIGH 27619 919 781-7420
ST U OF NY-BUFF

SHICK, JAFAR MO AN AC
7321 GRIST MILL RD. 61 62 72
RALEIGH 27609 919 755-8000
U OF TEHRAN

VEST, HOWARD RYLAND, JR. AN AC
1204 MELTON COURT 71 71 74
BLUE RIDGE ANESTHESIA
RALEIGH 27615 919 781-4311
U OF VIRGINIA

WOODARD, PAUL RICHARD AN AC
1825 ST. MARY'S ST. 79 80 85
RALEIGH 27608 919 755-8000
U OF NC

CRITICAL CARE MEDICINE

HAYES, DAVID ALLEN CCM /IM AC
3320 WAKE FOREST RD. 72 72 79
PO BOX 18700
RALEIGH 27609 919 878-0361
U OF VIRGINIA

CARDIOVASCULAR DISEASES

CAVINESS, VERNE STRUDWICK CD /IM L/RT
913 VANCE ST. 21 21 26
RALEIGH 27608 919 832-4258
JEFFERSON

CHEELY, GEORGE RAYBURN CD /IM AC
3020 NEW BERN AVE., STE. 420 74 77 79
RALEIGH 27610 919 833-5111
U OF PENN

COLLMAN, MITCHELL SCOTT CD /IM AC
PO BOX 17569 79 80 84
RALEIGH 27619 919 783-5273
ALBANY MED COLL

EMERY, DARYL CHARLES CD /IM AC
3320 WAKE FOREST RD. 81 82 86
RALEIGH 27615 919 872-4850
BOWMAN GRAY

FOSTER, JAMES ROBERT CD AC
WAKE HEART ASSOCIATES 69 69 90
PO BOX 14427
RALEIGH 27620 919 231-8253
CORNELL U

GINN, WILLIAM M. , JR. CD /IM AC
2800 BLUE RIDGE, STE. 205 59 59 66
RALEIGH 27607 919 782-0414
U OF NC

HICKS, CHARLES HENRY CD AC
3324 SIX FORKS RD. 76 77 82
RALEIGH 27609 919 781-7772
U OF NC

KELLEY, JOHN SIMPSON CD /IM AC
3324 SIX FORKS RD. 74 74 78
RALEIGH 27609 919 781-7772
BOWMAN GRAY

KENNEDY, WILLARD LEE CD /IM AC
3324 SIX FORKS RD. 75 75 81
RALEIGH 27609 919 781-7772
BOWMAN GRAY

LOCKLEAR, JIMMY CD /IM AC
3320 OLD WAKE FOREST RD. 80 83 85
PO BOX 18700
RALEIGH 27609 919 872-4850
U OF NC

MANGANO, CHARLES ANGELO, JR. CD /IM AC
3020 NEW BERN AVE. STE. 420 74 75 79
RALEIGH 27610 919 231-6132
U OF ROCHESTER

MANN, JAMES TIFT, III CD AC
WAKE HEART ASSOCIATES 69 70 78
PO BOX 14427
RALEIGH 27620 919 832-9253
U OF NC

MILLWARD, DAVID KENT CD /IM AC
3320 WAKE FOREST RD. 65 65 72
RALEIGH 27609 919 872-4850
GEO WASHINGTON U

NEWMAN, WILLIAM NEAL CD /IM AC
WAKE HEART ASSOCIATES 77 82 83
PO BOX 14427
RALEIGH 27620 919 832-9253
DUKE

NONEMAN, JACK W., JR. CD /IM AC
3324 SIX FORKS RD. 77 77 87
RALEIGH 27609 919 781-7772
U OF NC

NUTT, JAMES EDWARD CD /IM AC
3324 SIX FORKS RD. 74 75 81
RALEIGH 27609 919 781-7772
MED COLL OF GA

PAAR, JOHN ARTHUR CD /IM AC
WAKE MEDICAL CENTER 60 61 68
3000 NEW BERN AVE.
RALEIGH 27610 919 250-8000
U OF PITTSBURGH

REDDY, AMARENDRA BUSA CD /IM AC
3020 NEW BERN AVE., STE. 410 68 74 76
RALEIGH 27610 919 833-5111
GANDHI MED COLL

ROSE, GREGORY C. CD AC
3020 NEW BERN AVE. STE. 520 80 80 88
RALEIGH 27610 919 832-9253
ST LOUIS U

SCANLAN, JAMES GEORGE CD /IM AC
2800 BLUE RIDGE BLVD., #301 73 74 80
REX MEDICAL OFFICE BLDG.
RALEIGH 27607 919 881-0160
NORTHWESTERN U

SCOVIL, JAMES A., JR. CD /IM AC
3020 NEW BERN AVE. STE. 440 71 71 81
RALEIGH 27610 919 856-1941
U OF NC

SHAH, PRIYAVADAN MANEKLAL CD /IM AC
121 EDINBURGH ST. #208 72 73 82
CARY 27511 919 469-9919
BARODA U

WYNIA, VIRGIL HOWARD CD /IM AC
3020 NEW BERN AVE. #420 72 74 81
RALEIGH 27610 919 833-5111
HARVARD

ZELLINGER, MICHAEL JAY CD /IM AC
WAKE HEART ASSOCIATES 73 75 81
PO BOX 14427
RALEIGH 27620 919 231-8253
DUKE

CARDIOVASCULAR SURGERY

CHAUDHRY, ABDUL GHAFOOR CDS /GS AC
2800 BLUE RIDGE BLVD. STE. 306 70 70 82
RALEIGH 27607 919 782-7900
KING EDWARD COLL

DAVIS, JAMES HOWELL CDS /TS AC
2800 BLUE RIDGE BLVD., STE 306 54 65 66
RALEIGH 27607 919 782-7900
U OF KANSAS

HELTON, WILLIAM CHARLES CDS /TS AC
3020 NEW BERN AVE. #560 69 69 78
RALEIGH 27610 919 231-6333
U OF MIAMI

HUNTER, ROBERT MERRILL CDS /TS AC
3020 NEW BERN AVE. #560 78 83 78
RALEIGH 27610 919 231-6333
BOWMAN GRAY

KORNEGAY, RAYMOND DEWITT CDS /TS L/RT
BOX 10976 45 45 56
RALEIGH 27605
BOWMAN GRAY

LANDVATER, LANCE ERIC CDS /TS AC
3020 NEW BERN AVE., STE. 560 77 77 89
RALEIGH 27610 919 231-6333
BOWMAN GRAY

ZEOK, JOHN VICTOR CDS /TS AC
3400 EXECUTIVE DR. STE. 102 67 81 82
RALEIGH 27609 919 872-8080
JEFFERSON

CHILD PSYCHIATRY

HAIZLIP, THOMAS MATTHEWS CHP /P AC
5201 REMBERT DRIVE 58 58 69
RALEIGH 27612 919 733-5344
U OF NC

MCREE, CHRISTINE ELLIS CHP AC
DOROTHEA DIX HOSP.-PSY 46 46 75
RALEIGH 27611 919 733-5344
TULANE U

NUNNALLY, JAMES THOMAS, III CHP /P AC
2000 YORKGATE DRIVE 59 59 71
RALEIGH 27612 919 781-1160
MED COLL OF GA

WALKER, PRESTON ALMAND CHP /P AC
5207 HAWKESBURY 59 60 67
RALEIGH 27606 919 733-5130
MED U OF SC

COLON AND RECTAL SURGERY

SALEEBY, RICHARD GEORGE CRS L
3801 COMPUTER DRIVE 46 47 55
RALEIGH 27609 919 787-2542
JEFFERSON

DERMATOLOGY

ANDRUS, THOMAS ROSS, JR. D AC
4005 CITY OF OAKS WYND 78 82 76
RALEIGH 27612 919 782-3782
U OF NC

BURTON, EARL EDWARD, JR. D /IM AC
3900 BROWNING PLACE 68 70 73
RALEIGH 27609 919 782-2735
MED COLL OF VA

CHIARAMONTI, ALEXANDER D AC
101 CARY PKWY. SW, #210 76 76 77
CARY DERMATOLOGY CTR.
CARY 27511 919 467-8556
U OF MICHIGAN

FARMER, JOHN LOVELACE, JR. D AC
231 BRYAN BUILDING 55 55 62
RALEIGH 27605 919 828-0288
DUKE

GOLDSTEIN, BETH GOODRICH D C
101 S. W. CARY PARKWAY 86 87 90
SUITE 210
CARY 27511 919 467-8556
MED COLL OF GA

JOHNSON, ROBERT BRUCE D AC
101 CARY PKWY. SW #210 78 82 86
CARY DERMATOLOGY CTR.
CARY 27511 919 467-8556
DUKE

92. WAKE COMPONENT SOCIETY (Continued)

JORDAN, H. MENDALL D AC
2800 BLUE RIDGE BLVD. #302 68 72 72
RALEIGH 27607 919 781-1001
BOWMAN GRAY

KANOF, ELIZABETH PASCHER D AC
3400 EXECUTIVE DRIVE 60 65 66
RALEIGH, N, C. 27609 919 878-0310
NEW YORK U

KULP, KENNETH ROBERT D AC
3100 DURALEIGH RD. 74 74 79
RALEIGH 27612 919 881-5409
U OF NC

MILLER, WILLIAM STACEY D AC
3803-A COMPUTER DR. 61 61 69
RALEIGH 27609 919 782-2152
U OF NC

QUEEN, LAURINDA LEE D AC
4505 FAIR MEADOWS LN.,STE.103 81 82 86
RALEIGH 27607 919 783-7877
U. OF ARIZONA

SCOTT, HARRY WHITE D AC
3900 BROWNING PL.,STE. 202 62 62 71
RALEIGH 27609 919 782-2735
U OF NC

WILKINSON, JAMES SPENCER,SR. D L
215 BRYAN BLDG. 38 38 40
RALEIGH 27605 919 832-6044
U OF PENN

DIAGNOSTIC RADIOLOGY

CHARLTON, OLIVER PATRICK DR AC
4420 LAKE BOONE TRAIL 61 77 77
RALEIGH 27607 919 755-3023
U-WITWATERSRAND

DETWEILER, DONALD GENE DR AC
6612 FIFE BREW LANE 78 80 83
RALEIGH 27614 919 783-3023
EMORY U

ENTERLINE, DAVID SCOTT DR /NR AC
4420 LAKE BOONE TR. 82 82 79
RALEIGH 27607 919 783-3023
U OF NC

EYSTER, JAMES M. DR AC
1028 WASHINGTON ST. 80 80 86
PO BOX 10956
RALEIGH 27605 919 834-8733
INDIANA U

FEIN, ALAN BRUCE DR /IM AC
3821 MERTON DR. 78 79 87
RALEIGH 27609 919 755-8511
COLUMBIA U

HONEYCUTT, LATTIE FULLER DR AC
P. O. BOX 17947 67 67 76
RALEIGH 27619 919 954-3370
U OF NC

MADRY, HERBERT RAYMOND, JR. DR AC
2105 WHITE OAK ROAD 56 56 62
RALEIGH 27608 919 833-9838
BOWMAN GRAY

MOSER, WADE HAUSER, JR. DR AC
CAPITAL RADIOLOGY ASSOC. 74 74 73
P. O. BOX 17947
RALEIGH 27619 919 847-8564
U OF NC

PETERS, BRYAN MACLIN DR AC
3821 MERTON DR. 81 85 80
RALEIGH 27609 919 250-8511
DUKE

RAMQUIST, NEIL ALBERT DR AC
4101 HENRY J. MENNINGER WYND. 77 78 79
RALEIGH 27612 919 783-3023
U OF CA-DAVIS

SCHAAF, ROBERT EDMUND DR AC
WAKE RADIOLOGY CONSULTANT 76 77 81
P. O. BOX 19366
RALEIGH 27619 919 787-8199
TUFTS U

SNYDER, EDWARD SUTTON DR /NM AC
1216 BARCROFT PLACE 65 65 72
RALEIGH 27615 919 847-1289
GEORGETOWN U

WILLIAMS, ROBERT DR L/RT
2305 HATHAWAY ROAD 35 35 46
RALEIGH 27608 919 833-5645
U OF PENN

EMERGENCY MEDICINE

BEST, RANDALL MARK EM AC
2004 LODESTAR DR. 81 82 88
RALEIGH 27615 919 733-6220
U OF NC

HAMMER, DOUGLAS IRA EM /GPM AC
PO BOX 30786 62 63 75
RALEIGH 27622 919 847-8821
TUFTS U

HEMMERLEIN, ARTHUR HANS EM /FP AC
1209 RAINWOOD LANE 73 74 86
RALEIGH 27615 919 755-3100
ST LOUIS U

JOHNSON, STEPHEN EDWARD EM /IM AC
PO BOX 229 75 76 82
TRAVERSE CITY, MI 49684 919 755-3100
CASE WESTERN RES

ORDONEZ, ESPERANZA MARIA EM C
3700 EBENEZER CHURCH RD. 78 79 90
RALEIGH 27612 919 937-6600
BOSTON U

VAUGHN, DONALD EUGENE EM /FP AC
120 WIND CHIME COURT 57 61 61
RALEIGH 27615 919 847-8821
U OF TENNESSEE

WIEGAND, STEVEN FREDERICK EM /FP AC
10305 WHITESTONE ROAD 77 78 80
RALEIGH 27615 919 848-9471
HAHNEMANN

ZERBY, GLENN ALAN EM /IM AC
143 NICKLAUS DR. 80 80 87
GARNER 27529 919 783-3038
JEFFERSON

ENDOCRINOLOGY

BECKER, DENIS I. END /IM AC
3410 EXECUTIVE DR., SUITE 205 72 72 77
RALEIGH 27609 919 876-7692
U OF KENTUCKY

COXE, JAMES SHERWOOD, III END /IM AC
3410 EXECUTIVE DRIVE 71 71 79
RALEIGH 27609 919 876-7692
U OF NC

WEIR, SHAWNEE DEE END C
KAISER PERMANENTE 80 80 91
3120 HIGHWOODS BLVD.
RALEIGH 27604 919 881-5412
U. OF MINN.

FAMILY PRACTICE

ADELMAN, RICHARD D. FP AC
7320 SIX FORKS RD. STE. 260 75 76 86
RALEIGH 27615 919 846-9292
NORTHWESTERN U

ALDERMAN, ALLISON M., JR. FP AC
242 BRYAN BLDG. 46 47 52
CAMERON VILLAGE
RALEIGH 27605 919 832-1205
BOWMAN GRAY

BAGWELL, JOHNNY WAYNE FP AC
1005 VANDORA SPRINGS RD. 76 77 79
GARNER 27529 919 779-1440
BOWMAN GRAY

BALOCH, MOHAMMAD HAROON FP AC
2800 BLUE RIDGE BLVD. STE. 402 70 70 82
RALEIGH 27607 919 787-0486
KING EDWARD COLL

BARRICK, HARRY W., JR. FP AC
1900 HIGHLAND PL. 57 57 59
RALEIGH 27607 919 733-3223
DUKE

BARTELS, GEORGE THOMAS FP /NTR AC
605 BENSON RD. 78 80 80
GARNER 27529 919 779-6330
DUKE

BEAN, GARY OWEN FP AC
1109 DRESSER COURT 76 80 83
RALEIGH 27609 919 872-4900
BOWMAN GRAY

BENSEN, VLADIMIR BASIL FP /GS L
422 ST.MARY'S STREET 46 49 49
RALEIGH 27605 919 832-6855
NEW YORK MED COL

BOWEN, JANET WILDER FP C
117 ESCHER LANE 85 88 90
CARY 27511 919 323-1152
U OF TENNESSEE

BRAMMER, THOMAS DALTON FP AC
1005 VANDORA SPRINGS RD. 83 86 89
GARNER 27529 919 779-1440
MED COLL OF VA

BRASHEAR, RALPH GUY FP AC
P. O. BOX 827 60 61 61
WENDELL 27591 919 365-7366
OHIO STATE U

BROWN, DONALD CLAUDE FP /GER AC
305-B S. ACADEMY ST. 74 74 85
CARY 27511 919 467-3730
U OF NC

BURROUGHS, FRANKLIN DANFORD FP AC
4812 SLEEPY HOLLOW DR. 63 63 67
RALEIGH 27612 919 870-9889
U OF NC

BURTON, PHILIP DOUGLAS FP AC
802 S. MAIN ST. 81 81 88
WAKE FOREST 27587 919 556-7111
EAST CAROLINA U

CHURCH, C. FRANKLIN FP /D AC
1109 DRESSER COURT 63 63 68
RALEIGH 27609 919 872-4900
DUKE

CORPENING, ALBERT NEWTON FP AC
141 E. MAIN ST. 55 55 58
PO BOX 158
YOUNGSVILLE 27596 919 556-2126
BOWMAN GRAY

CRUMPLER, RANDALL SCOTT FP AC
1005 VANDORA SPRINGS RD. 80 81 84
GARNER 27529 919 779-1440
BOWMAN GRAY

DELEON, ARTURO DEJESUS FP /IM AC
1109 DRESSER COURT 61 71 75
RALEIGH 27609 919 872-4900
FAR EASTERN U

EVANS, WALLACE NICKLES, II FP AC
121 EDINBURGH SOUTH, STE. 100 73 73 75
CARY 27511 919 467-3281
U OF ALABAMA

GALLOWAY, JAMES HERVEY FP L/RT
2617 ROYSTER ROAD 50 50 53
RALEIGH 27608 919 781-7547
U OF PENN

GOEL, ATUL KUMAR FP C
2620 NEW BERN AVE. 86 87 91
RALEIGH 27610 919 231-2800
SUNY-SYRACUSE

HAMAD, MAZEN E.Z. FP AC
3100 DURALEIGH RD. 76 82 90
RALEIGH 27612 919 881-5300
DAMASCUS U

HAMRICK, ALGER VASON, III FP AC
1109 DRESSER COURT 72 72 79
RALEIGH 27609 919 872-4900
U OF NC

HEDRICK, WILLIAM WESTON FP AC
1805 NEW HOPE RD. 57 57 62
RALEIGH 27604 919 231-6215
BOWMAN GRAY

HILL, JAMES CARVER FP /EM AC
1316 YUBINARANDA 84 85 82
CARY 27511 919 469-9635
U OF NC

HORTON, ROBERT MARSHALL FP AC
3124 BLUE RIDGE RD. 72 73 75
RALEIGH 27612 919 782-2333
MED COLL OF VA

92. WAKE COMPONENT SOCIETY (Continued)

HWANG, YINNAN GARY FP AC
PO BOX 425 70 84 86
ZEBULON 27597 919 269-4101
CHINA MED COLL

KENAN, LEROY FULTON FP AC
PO BOX 99 56 56 59
SNEADS FERRY 28468 919 782-5601
BOWMAN GRAY

LEE, WILLIAM DAVID FP AC
3100 BLUE RIDGE RD., STE. 202 74 74 77
RALEIGH 27612 919 782-0146
U OF NC

LUYANDO, YVONNE FP C
171 SPRINGBERRY LANE 84 88 90
CHAPEL HILL 27514 919 881-5360
COLUMBIA U

MATTHEWS, MARJORIE E.F. FP C
519 WADE AVE., APT. 3 61 61 65
RALEIGH 27605
BOWMAN GRAY

MCBRIDE, J. MARVIN, JR. FP AC
1109 DRESSER COURT 82 82 88
RALEIGH 27609 919 872-4900
DUKE

MEDLIN, CHARLES THOMAS FP AC
7012 FARMDALE RD. 52 52 53
RALEIGH 27610 919 772-3266
BOWMAN GRAY

MELTZER, MORTON FP /P AC
ROUTE 1, BOX 231-A 65 65 70
CAMERON 28326 919 245-4819
NEW YORK MED COL

MOORE, GEORGE HORACE FP AC
833 DURHAM RD., STE. C 81 81 80
WAKE FOREST 27587 919 556-6762
EAST CAROLINA U

MOSELEY, JAMES RENNIE FP AC
340 N. MAIN STREET 54 55 70
WAKE FOREST 27587 919 556-4826
U OF ALABAMA

OMAN, TIMOTHY ROY FP C
3100 BLUE RIDGE RD., STE. 202 81 82 90
RALEIGH 27612 919 782-0146
U OF VIRGINIA

PEARSON, JOHN KENT FP L/RT
P. O. BOX 727 53 53 56
APEX 27502 919 362-8312
DUKE

RABON, F. SCOTT FP AC
4713 PEMBERTON DR. 85 85 89
RALEIGH 27609 919 782-0146
MED U OF SC

SCHUMACK, EDWARD JAMES FP /P RT
PO BOX 16125 66 72 85
RALEIGH 27610 919 828-6019
LOYOLA U

SPIVEY, DAVID EUGENE, JR. FP C
1005 VANDORA SPRINGS RD. 87 89 85
GARNER 27529 919 772-4756
BOWMAN GRAY

STEVENS, JAMES ROMER FP C
4643 MILL VILLAGE RD. 87 88 85
RALEIGH 27612 703 671-9348
EAST CAROLINA U

SWEENEY, CHARLES LESLIE, JR. FP RT
613 SAMPSON ST. 57 57 62
RALEIGH 27609 919 787-1261
DUKE

THOMAS, BEN DAVID FP L
PO BOX 218 44 46 47
ZEBULON 27597 919 269-9111
MED U OF SC

TOVE, NANCY LOUISE FP AC
101 S.W. CARY PKWY. STE. 60 82 83 86
CARY 27511 919 469-5072
U OF NC

TUCKER, GEORGE FRANKLIN FP L/RT
PO BOX 99 52 52 53
ZEBULON 27597 919 269-9144
MED COLL OF VA

TYREE, LARRY ALLEN FP AC
1109 DRESSER COURT 62 62 68
RALEIGH 27609 919 872-4900
BOWMAN GRAY

WARREN, JULIAN MARION FP
BOX 1120, SPRING HOPE CLINIC 56 57 58
SPRING HOPE 27882 919 478-4600
U OF VIRGINIA

WHITAKER, DONALD NASH FP L/RT
2016 CAMERON STREET 40 40 46
RALEIGH 27605 919 832-0343
TEMPLE U

WILKINS, EZRA BROOKS FP AC
3100 BLUE RIDGE RD., STE. 202 75 75 79
RALEIGH 27612 919 782-0146
U OF NC

ZELLER, DONALD JOHN FP AC
3100 BLUE RIDGE RD., STE. 202 83 84 87
RALEIGH 27607 919 782-0146
JEFFERSON

GASTROENTEROLOGY

BARISH, CHARLES FRANKLIN GE /IM AC
3100 BLUE RIDGE RD., STE. 300 80 81 85
RALEIGH 27612 919 781-7500
U OF FLORIDA

DE LISSIO, MICHAEL G. GE AC
101 S. W. CARY PARKWAY 80 81 88
CARY 27511 919 469-1858
ST U OF NY-BUFF

HARPER, ROBERT NORMENT, JR. GE /IM AC
3320 WAKE FOREST RD. 77 77 82
RALEIGH MEDICAL PLAZA
RALEIGH 27609 919 872-4850
BOWMAN GRAY

MCKAY, MICHAEL DIXON GE AC
3320 WAKE FOREST RD. 82 83 87
RALEIGH 27609 919 872-4850
MED COLL OF GA

NEWELL, LANNING RICHARD GE /IM AC
3320 EXECUTIVE DR., STE. 119 75 77 81
RALEIGH 27609 919 878-9465
U OF NC

PIERSON, WILLARD CRESSE, JR. GE /IM AC
3320 WAKE FOREST RD. 66 66 73
RALEIGH 27609 919 872-4850
DUKE

PIKE, MICHAEL ROBERT GE /IM AC
101 S. W. CARY PARKWAY 73 74 81
CARY 27511 919 469-1858
MT SINAI SCH MED

POLLOCK, MORRIS ARTHUR GE /IM AC
3320 WAKE FOREST RD. 69 70 77
RALEIGH 27609 919 872-4850
JEFFERSON

SCHWARZ, RONALD PAUL GE /IM AC
3521 HAWORTH DR. 77 79 83
RALEIGH 27609 919 782-1806
CORNELL U

GERIATRICS

MALONEY, THOMAS RICHARD GER /IM RT
1111 LUPINE CT., APT. B 47 48 71
RALEIGH 27606 919 233-9267
NEW YORK U

SANCHEZ, CLARE JEANNE GER /IM AC
DOROTHEA DIX HOSPITAL 75 77 85
MEDICAL SURG. DIV. DIRECTOR
RALEIGH 27611 919 733-5431
U OF COLORADO

GENERAL PRACTICE

BUCHIN, DAVID LEE GP /P AC
14212 CROSS CREEK ROAD 66 67 81
RALEIGH 27615 919 872-5411
ST U OF NY-BUFF

DEBNAM, GEORGE CLYDE GP /OBS AC
524 S. BLOUNT STREET 51 51 71
RALEIGH 27601 919 832-1667
MEHARRY MED COLL

MCDOWELL, ROBERT WARREN GP L
734 ROCK QUARRY ROAD 51 53 67
RALEIGH 27610 919 832-5389
MEHARRY MED COLL

PITTMAN, JERRY M. GP /EM AC
8312 CREEDMOOR RD. 79 82 88
RALEIGH 27613 919 846-7403
U OF SOU ALA

THOMPSON, BENJAMIN EVERETT,JR. GP AC
301 S. ACADEMY STREET 58 58 61
CARY 27511 919 467-9961
U OF NC

GENERAL PREVENTIVE MEDICINE

TILSON, HUGH H. GPM /PH AC
3030 CORNWALLIS RD. 64 64 79
ESP DIV. BURROUGHS WELLCOME
RESEARCH TRIANGLE PK 27709 919 248-4354
WASHINGTON U

GENERAL SURGERY

CANNON, WOODWARD GS AC
2800 BLUE RIDGE BLVD. STE. 305 70 72 78
RALEIGH 27607 919 781-7416
HARVARD

CLINE, WILLIAM TUCKER GS /VS AC
3400 EXECUTIVE DRIVE 78 79 83
RALEIGH 27609 919 876-2732
DUKE

DAVIS, DWIGHT GROOME, JR. GS /TS AC
5825 MAPLE RIDGE RD. 54 61 61
RALEIGH 27609 919 876-3671
JEFFERSON

DUNN, JAMES RALPH, JR. GS /TS AC
109 MISS GEORGIA CT. 51 51 58
CARY 27511 919 733-5401
JOHNS HOPKINS

FAUST, KIRK BERRY GS /VS AC
1101 DRESSER COURT 82 83 90
RALEIGH 27609 919 876-2010
U OF ALABAMA

GADA, PRESTON HERBERT GS /TS AC
2800 BLUE RIDGE BLVD. 63 68 68
SUITE 305-2
RALEIGH 27607 919 781-7412
MED COLL OF VA

GOODSON, JOHN PHILLIP GS AC
PO BOX 32090 63 63 75
3814 BROWNING PL.
RALEIGH 27622 919 781-0710
U OF NC

HARTZOG, HENRY GERARD, III GS AC
PO BOX 32090 62 62 69
RALEIGH 27622 919 781-0710
U OF NC

HOBLER, KIRTLAND EDWARD GS AC
5401 HUNTER HOLLOW DR. 62 63 90
RALEIGH 27606 919 881-5529
SUNY-SYRACUSE

LEB, STEPHEN MARC GS AC
3801 COMPUTER DR. #207 75 77 88
RALEIGH 27609 919 787-8393
U OF MIAMI

LONG, FRED JOSEPH, JR. GS AC
PO BOX 14445 72 73 80
RALEIGH 27620 919 821-5771
MEHARRY MED COLL

MADDOX, THOMAS WILBUR GS /VS AC
PO BOX 32090 79 80 86
2800 BLUE RIDGE ROAD
RALEIGH 27622 919 781-0710
U OF ALABAMA

MANLY, ISAAC VAUGHN GS /TS AC
2800 BLUE RIDGE BLVD. 46 46 55
SUITE 305-1
RALEIGH 27607 919 781-7410
HARVARD

MASSENGILL, G.K. GS L/RT
3308 TIMBER LAKE ROAD 36 36 57
RALEIGH 27604 919 872-6924
DUKE

92. WAKE COMPONENT SOCIETY (Continued)

AYERS, RICHARD STANTON GS /TS AC 65 65 73
2800 BLUE RIDGE BLVE.
STE. 305-3
RALEIGH 27607 919 781-7414
WASHINGTON U

NG, GODOFREDO TAN GS /TS AC 62 62 70
1101 DRESSER COURT
RALEIGH 27609 919 876-2010
U OF PHILIPPINES

OLLER, DALE WILLIAM GS /VS AC 68 72 88
3000 NEW BERN AVE.
RALEIGH 27610 919 755-8698
GEO WASHINGTON U

PASCHAL, GEORGE W., JR. GS L/RT 31 31 46
3334 ALAMANCE DRIVE
RALEIGH 27609 919 787-2177
JEFFERSON

PASCHAL, GEORGE W.,III GS /CDS AC 73 73 78
2800 BLUE RIDGE BLVD.,STE. 503
PO BOX 32090
RALEIGH 27622 919 781-0710
BOWMAN GRAY

POWELL, DAVID CLIFTON GS AC 78 79 75
1101 DRESSER COURT
RALEIGH 27609 919 876-2010
U OF NC

QUIGLESS, MILTON DOUGLAS, JR. GS AC 71 72 79
100 SUNNYBROOK ROAD
P. O. BOX 14445
RALEIGH 27620 919 281-6085
MEHARRY MED COLL

SEDWITZ, JOSEPH LEE GS /GYN AC 51 61 61
231 HOSPITAL ROAD
ZEBULON 27597 919 269-9310
U OF VIRGINIA

SHANNON, JOHN JOSEPH, JR. GS AC 81 83 89
3616 KINGSHILL RD.
BIRMINGHAM, AL 35223 919 872-8080
U OF MIAMI

SIMON, ROBERT CURRIE GS C 61 88 91
3100 DURALEIGH RD.
RALEIGH 27607 919 881-5580
WASHINGTON U

SINCLAIR, LOUIS GORDON GS /GYN 33 33 39
3309 WHITE OAK ROAD
DECEASED--1-11-91
RALEIGH 27609 919 787 -9356
U OF PENN

STIRMAN, JERRY ARCHIBALD, JR. GS /TS AC 74 74 80
1101 DRESSER COURT
RALEIGH 27609 919 876-2010
U OF TEXAS

STOCKS, LEWIS HENRY, III GS /TS AC 71 73 76
1101 DRESSER CT.
RALEIGH 27609 919 876-2010
M C OF WISCONSIN

SULLIVAN, WILLIAM GREGORY GS AC 60 61 73
AHEC, WAKE COUNTY MED. CTR.
3000 NEW BERN AVE.
RALEIGH 27610 919 250-8798
LOYOLA U

TOLNITCH, LISA ANNE GS AC 83 88 89
3410 EXECUTIVE DR., STE. 203
RALEIGH 27609 919 790-8055
U OF LOUISVILLE

WALDENBERG, LEOPOLD MARK GS AC 65 65 72
3400 EXECUTIVE DR. STE. 104
P. O. BOX 17200
RALEIGH 27619 919 876-2732
TUFTS U

YARBOROUGH, MICHAEL FRANCIS GS /TS AC 72 72 81
3400 EXECUTIVE DR. STE. 104
PO BOX 17200
RALEIGH 27619 919 876-2732
U OF NC

YNECOLOGY

BRANAMAN, GUY HEWITT, JR. GYN L/RT 39 47 47
915 WILLIAMSON DR.
RALEIGH 27608 919 833-4080
MED COLL OF VA

BYRUM, CLIFFORD CONWELL GYN L 43 43 46
1221 DIXIE TRAIL
RALEIGH 27607 919 782-0124
JEFFERSON

COURIE, MAURICE NICKOLA GYN AC 59 59 66
3145 ESSEX CIRCLE
RALEIGH 27608 919 782-3698
DUKE

FULGHUM, MARY SUSAN KIRK GYN AC 71 71 77
REX HOSPITAL BIRTH CENTER
4420 LAKE BOONE TR., STE. 302
RALEIGH 27607 919 832-5529
U OF NC

HEATON, FREDERICK CHRISTIAN GYN AC 72 72 76
3809 COMPUTER DR., STE. 201
RALEIGH 27609 919 781-6200
U OF NC

MARKS, JOHN JACOB GYN AC 79 80 86
5512 HAWTHORNE PARK
RALEIGH 27613 919 848-1990
U OF NC

SUMMERLIN, ARTHUR ROGERS GYN AC 48 48 56
2800 BLUE RIDGE BLVD. #401
RALEIGH 27607 919 781-5504
U OF VIRGINIA

WILKERSON, LOUIS REAMS GYN AC 52 52 56
4420 LAKE BOONE TR., STE. 302
RALEIGH 27607 919 571-1040
MED COLL OF VA

HEMATOLOGY

ZEITLER, KENNETH DALE HEM /ON AC 75 75 83
PO BOX 30098
RALEIGH HEM/ONCOLOGY CLI.
RALEIGH 27622 919 781-7070
COLUMBIA U

HEAD AND NECK SURGERY

PRICE, HARVEY CRAIG HNS AC 78 80 83
3100 BLUE RIDGE RD., STE. 201
RALEIGH 27607 919 782-8955
U OF NC

HAND SURGERY

EDWARDS, GEORGE SADLER, JR. HS/ORS AC 78 79 85
3410 EXECUTIVE DR.
RALEIGH 27609 919 872-3171
U OF NC

INFECTIOUS DISEASES

HAYWOOD, HUBERT BENBURY, III ID AC 72 72 79
3320 WAKE FOREST RD.
PO BOX 18700
RALEIGH 27609 919 872-4850
U OF NC

INTERNAL MEDICINE

AGAYOFF, JOHN D., JR. IM /GE AC 65 66 88
3410 EXECUTIVE DR. STE. 201
RALEIGH 27609 919 850-0100
DOWNSTATE ME CTR

ALLEN, CYRIL ANTHONY IM /HEM AC 74 76 80
P. O. BOX 14005
RALEIGH 27620 919 828-3466
U OF NC

ASHBURN, PHILIP EUGENE IM /GE AC 74 74 78
3100 BLUE RIDGE RD. #300
RALEIGH 27612 919 781-7500
BOWMAN GRAY

BELLAMY, WILLIAM EDWARD, JR. IM /PUD AC 47 48 60
3101 ESSEX CIRCLE
RALEIGH 27608 919 782-2631
BOWMAN GRAY

BILBRO, ROBERT HODGES IM /CD AC 66 66 72
3521 HAWORTH DR.
RALEIGH 27609 919 782-1806
U OF NC

BLAKE, GERALD WAYNE IM /ID AC 67 67 75
3521 HAWORTH DR.
RALEIGH 27609 919 782-1806
U OF NC

BOERNER, DAVID FRANKLIN IM /PUD AC 76 76 81
3100 BLUE RIDGE RD.STE. 300
RALEIGH 27612 919 781-7500
PENN STATE U

CAMP, THOMAS FRANCIS, JR. IM /CD AC 62 62 69
2800 BLUE RIDGE, STE. 205
RALEIGH 27607 919 782-0414
EMORY U

CAMPBELL, DONALD BARNES IM AC 71 72 76
3100 BLUE RIDGE RD.
RALEIGH 27612 919 781-7500
U OF ALABAMA

COLSON, LACY ALSTON IM /FP AC 72 73 81
23-G SUNNYBROOK ROAD
RALEIGH 27610 919 821-5201
HOWARD U

COMBS, JOSEPH JOHN IM /PUD L/RT 26 26 29
218 SPRINGMORE DR.
RALEIGH 27615 919 848-7218
COLUMBIA U

CRANE, JEFFREY MAJOR IM /HEM AC 77 83 90
4420 LAKE BOONE TRAIL
RALEIGH 27612 919 781-7070
U OF FLORIDA

CRITTENDEN, SUSAN LAWRENCE IM AC 81 82 86
103 BAINES CT.
CARY 27511 919 467-6125
U OF NC

CURRIN, JOE BADGETT, JR. IM AC 61 61 65
500 N. ENNIS STREET
FUQUAY-VARINA 27526 919 552-2275
BOWMAN GRAY

DARKES, LEROY SCOTT IM AC 82 85 91
3100 DURALEIGH RD.
RALEIGH 27612 919 881-5422
RUTGERS MED. SCH.

DASCOMB, HARRY EMERSON IM /ID AC 43 43 81
6723 FALCONBRIDGE RD.
CHAPEL HILL 27514 919 250-8520
U OF ROCHESTER

DEJARNETTE, LISA FAYE IM C 86 87 83
4430 JEWELL ST APT. 112
SAN DIEGO, CA 92109 919 782-1806
U OF NC

DIAB, ALBERT JOSEPH IM AC 54 54 59
3801 COMPUTER DRIVE
RALEIGH 27609 919 787-5217
U OF NC

DOUGHERTY, KEVIN E. IM AC 85 88 88
RALEIGH MEDICAL PLAZA
3320 WAKE FOREST RD.
RALEIGH 27609 919 878-0219
U OF MARYLAND

EDMONDSON, MARY L. CANNING IM AC 85 85 90
WAKE COUNTY MEDICAL CENTER
RALEIGH 27610 919 250-8520
U OF NC

EDMUNDSON, WARNER LEE WELLS IM AC 80 80 77
3900 BROWNING PLACE
RALEIGH 27609 919 781-9650
U OF NC

EMERY, JOHN BLOOM, JR. IM AC 63 66 90
3100 DURALEIGH RD.
RALEIGH 27615 919 881-5404
DUKE

EURE, CHARLES ALLAN IM AC 67 67 73
3521 HAWORTH DR.
RALEIGH 27609 919 782-1806
U OF NC

FERDON, BENJAMIN BETHEA IM AC 62 62 69
3100 BLUE RIDGE BLVD.,#300
RALEIGH 27612 919 781-7500
TULANE U

FLEMING, BARBARA BURCH IM AC 86 89 90
2904 AUGUSTA CT.
RALEIGH 27607 919 733-7081
U OF MARYLAND

92. WAKE COMPONENT SOCIETY (Continued)

GADDY, ROBERT EDWIN, JR. IM /CD AC
3900 BROWNING PLACE 59 59 59
RALEIGH 27609 919 781-9650
DUKE

GOFF, DAVID ALBERT IM /PD AC
2801 BLUE RIDGE RD., STE. G-10 81 82 78
RALEIGH 27607 919 783-0707
U OF NC

GRANT, GEORGE REDD, JR. IM AC
3101 ESSEX CIRCLE 63 63 69
RALEIGH 27608 919 782-2631
DUKE

GRAY, THOMAS GLEN IM AC
2620 NEW BERN AVE. 86 87 90
RALEIGH 27610 919 250-2654
EAST CAROLINA U

GREMILLION, DAVID HENRY IM /ID AC
3000 NEW BERN AVE. 72 00 89
RALEIGH 27610 919 755-8520
LA STATE U

HARDISON, JOSEPH H.,JR. IM /GE RT
2801 LAKEVIEW 56 56 64
RALEIGH 27609 919 872-4850
DUKE

HARDISON, MITCHELL DALE IM C
3900 BROWNING PL. 80 81 81
RALEIGH 27609 919 781-9650
U OF NC

HARPER, WAYNE LEE IM AC
3100 BLUE RIDGE RD. 78 80 82
RALEIGH 27612 919 781-7500
DUKE

HARRIS, ROBERT THOMAS IM /PYM AC
3320 WAKE FOREST RD. 78 81 86
RALEIGH 27609 919 872-4850
EMORY U

HART, TIMOTHY BERTRAND IM /PUD AC
3320 WAKE FOREST RD. 79 80 84
RALEIGH 27609 919 872-4850
MED COLL OF VA

JACOBSON, ERIC WILLIAM IM /RHU AC
3831 MERTON DR. 83 84 89
RALEIGH 27609 919 781-9633
RUSH MED COLL

JAIN, REKHA IM /PD AC
2411 E. MILLBROOK RD. STE. 111 76 80 84
RALEIGH 27604 919 878-8620
MAHATMA GANDHI

JOHNSON, JOY MOORING IM AC
4612 GUNSTON PL 82 85 79
RALEIGH 27612 919 783-5312
EAST CAROLINA U

JOHNSTON, FRANK SMITH, JR. IM AC
3900 BROWNING PLACE 59 59 69
RALEIGH 27609 919 781-9650
U OF NC

KERMON, LOUIS TODD IM /CD L/RT
2708 PEACHTREE ST. 50 50 52
RALEIGH 27608 919 782-0563
JEFFERSON

KIM, YOUNG CUE IM AC
209 W. MILLBROOK ROAD 68 75 77
RALEIGH 27609 919 781-5933
KOREA U

KIMBRELL, ODELL C., JR. IM /END AC
240 BRYAN BUILDING 51 51 60
RALEIGH 27605 919 828-6393
U OF PENN

LANG, JOHN ALBERT, III IM /DIA AC
615 ST. MARY'S STREET 74 76 83
RALEIGH 27605 919 828-7773
U OF NC

LAPP, CHARLES WARREN IM /PD AC
3400 EXECUTIVE DRIVE 74 74 74
RALEIGH 27609 919 878-0900
ALBANY MED COLL

MARUCHECK, JOHN THOMAS IM AC
6217 DRESDEN LANE 78 79 83
RALEIGH 27612 919 878-0900
U OF OKLAHOMA

MCMANUS, HUGH FORREST, JR. IM L
3331 WHITE OAK RD. 38 38 41
RALEIGH 27609 919 832-6510
MED U OF SC

MERWARTH, CHARLES RICHARD IM /A AC
515 MARLOWE RD. 55 55 63
RALEIGH 27609 919 782-7500
DUKE

MILLER, PHILIP RAIFORD IM /CD AC
3100 BLUE RIDGE RD. 67 67 73
RALEIGH 27612 919 781-7500
BOWMAN GRAY

MORESCHI, RAFAEL MARIANO IM /CD AC
105-A KILMAYNE DR. 72 81 84
CARY 27511 919 467-2253
U OF ASUNCION

NICHOLS, MARK LOVEL IM /EM AC
3801 COMPUTER DR. 71 73 84
RALEIGH 27609 919 787-0302
MED COLL OF VA

NOBLE, RICHARD CLAIBORNE IM AC
2620 NEW BERN AVE. 84 85 82
RALEIGH 27610 919 231-2800
U OF NC

OATES, LARRY ALLEN IM AC
3100 DURALEIGH RD. 64 64 84
RALEIGH 27612 919 881-5300
OHIO STATE U

OJEDA, TOMAS IM AC
3100 DURALEIGH RD. 70 74 90
RALEIGH 27612 919 881-5300
U DE NUEVO LEON

OLIVER, FREDERICK CARLTON, JR. IM AC
103 BAINES COURT 75 76 79
CARY 27511 919 467-6125
MED U OF SC

PAGE, ERNEST BENJAMIN,JR. IM /CD AC
2500 BLUE RIDGE RD., STE. 201 49 53 55
RALEIGH 27607 919 881-0054
DUKE

PARSONS, JAMES SHERIDAN IM /GER AC
704 W. JONES STREET 76 76 75
RALEIGH 27603 919 832-5125
U OF NC

PETERSEN, KRISTI IM AC
7821 HIGHLANDVIEW 84 85 90
RALEIGH 27612 919 782-8260
U OF IOWA

PRITCHETT, DOUGLAS BRIAN IM /GE AC
3100 DURALEIGH RD. 82 83 89
RALEIGH 27607 919 881-5300
VANDERBILT U

PRITCHETT, NEWTON GEORGE IM L/RT
2800 BLUE RIDGE, STE. 205 42 53 53
RALEIGH 27607 919 782-0414
DALHOUSIE U

PROCTER, WILLIAM IVAN IM AC
3900 BROWNING PLACE 57 57 64
RALEIGH 27609 919 781-9650
DUKE

REES, MICHAEL STEVENS IM AC
3101 ESSEX CIRCLE, BLDG. E 76 76 79
RALEIGH 27608 919 782-2631
VANDERBILT U

REIGEL, HAIDEE IM AC
2820 HALF HITCH TRAIL 74 75 89
RALEIGH 27615 919 848-4434
U OF NY-ST BROOK

REKUC, GREGORY M. IM AC
3320 WAKE FOREST RD. 81 81 87
RALEIGH 27609 919 872-4850
U OF FLORIDA

RODMAN, MICHAEL DAVID IM AC
3100 DURALEIGH RD. 82 86 90
RALEIGH 27612 919 881-5996
U OF MASS

ROSE, GRACE WILLETT IM AC
3320 WAKE FOREST RD. 83 88 91
RALEIGH 27609 919 872-4850
DUKE

ROTHMAN, MARK DAVID IM /NEP AC
4021 BARRETT DR. 80 82 89
RALEIGH 27609 919 782-3378
AUTONOMA UNIV

RUBINO, JOHN IM /A AC
3521 HAWORTH DR. 83 84 87
RALEIGH 27609 919 782-1806
U OF CONNECTICUT

SENTER, WILLIAM JEFFRESS IM L
704 W. JONES STREET 42 42 4
RALEIGH 27603 919 832-512
U OF MARYLAND

SIDES, EVIN HENDERSON, III IM /ID AC
3320 EXECUTIVE DR. 65 65 7
RALEIGH 27609 919 876-968
U OF NC

SILVER, KRISTI DIANE IM AC
PO BOX 30786 85 85 8
RALEIGH 27609 919 847-882
U OF MARYLAND

SMITH, JANE SWAN IM AC
3320 OLD WAKE FOREST RD. 81 81 8
RALEIGH 27609 919 872-485
U OF CINCINNATI

SMITH, STEPHEN WAYNE IM /CD AC
2800 BLUE RIDGE, STE. 205 73 74 7
RALEIGH 27607 919 782-041
U OF NC

SPAIN, ROBERT SPRUILL IM /ADM AC
3707 OLD LASSITER MILL ROAD 46 46 5
RALEIGH 27609 919 782-280
WASHINGTON U

STARKENBURG, ROBERT J. IM AC
8301 WELLSLEY WAY 79 81 8
RALEIGH 27613 919 755-111
LA STATE U

STYRON, CHARLES WOODROW IM /DIA L
615 ST. MARY'S STREET 38 41 4
RALEIGH 27605 919 828-777
DUKE

TELFER, JAMES GAVIN, JR. IM /FP AC
305 S. ACADEMY STREET 71 77 7
CARY 27511 919 467-752
WASHINGTON U

THOMAS, EDWIN SCOTT IM AC
106 E. PARK ST. 64 64 8
CARY 27511 919 467-816
U OF NC

THURBER, DAVID CUSHMAN, JR. IM AC
3100 DURALEIGH RD. 77 79 8
RALEIGH 27612 919 733-515
U OF ROCHESTER

UMPHLET, THOMAS LEONARD IM L/RT
2519 WHITE OAK ROAD 34 34 3
RALEIGH 27609 919 787-965
U OF PENN

WARREN, LARRY E. IM AC
503 SUNNYBROOK ROAD 74 74 8
RALEIGH 27610 919 231-216
U OF NC

WATERMAN, DIEDRICH COLLINS IM /GE AC
3100 BLUE RIDGE RD. 80 80 8
RALEIGH 27612 919 781-750
U OF FLORIDA

WEHBIE, CHARLES SAM IM AC
3900 BROWNING PL. 82 00 8
RALEIGH 27609 919 781-365
BOWMAN GRAY

WILLETT, ROBERT W. IM /N AC
3320 WAKE FOREST RD. 48 53 5
RALEIGH 27609 919 782-750
DUKE

WILLIAMS, JOHN HOWARD IM /EN AC
1121 PARK RIDGE LN., #301 83 84 8
RALEIGH 27605
U OF NC

YELLIG, EDWARD BOOTH IM AC
3320 WAKE FOREST RD. 69 75 7
RALEIGH 27609 919 878-034
JEFFERSON

NEUROLOGY

BERTICS, GREGORY M. N AC
3821 MERTON DR. 82 86 8
RALEIGH 27609 919 782-345
DUKE

BOWMAN, MICHAEL HIGGINS N AC
3821 MERTON DR. 76 77 7
RALEIGH 27609 919 782-345
OHIO STATE U

92. WAKE COMPONENT SOCIETY (Continued)

FREEDMAN, STEVEN MITCHELL N AC
PO BOX 40999 72 72 80
RALEIGH 27629 919 782-3456
U OF PENN

HULL, KEITH LOWELL, JR. N /IM AC
PO BOX 40999 75 79 82
RALEIGH 27629 919 782-3456
DUKE

MCLAIN, LEE WILLIAM, JR. N AC
PO BOX 40999 61 61 86
RALEIGH 27629 919 782-3456
DUKE

SCHECTER, NANCY POST N AC
3320 EXECUTIVE DRIVE 79 83 84
RALEIGH 27609 919 872-0940
DUKE

WHITNEY, PAMELA JOYCE N AC
3320 EXECUTIVE DR., STE. 218 80 80 84
RALEIGH 27609 919 872-0940
U OF OKLAHOMA

EPHROLOGY

COOK, CHARLES ALVIN NEP /IM AC
3392 SIX FORKS RD. 75 77 82
RALEIGH 27609 919 872-8550
TUFTS U

KEENER, JOSEPH KEITH NEP /IM AC
101 DURYER COURT 75 75 86
CARY 27511 919 782-3378
ST LOUIS U

UCLEAR MEDICINE

ERWIN, ROBERT A. NM AC
3821 MERTON DR. 70 70 77
RALEIGH 27609 919 787-7411
CORNELL U

EONATAL-PERINATAL MEDICINE

UNN, LAURIE LOUISE NPM /PD AC
3000 NEW BERN AVE. 81 84 89
WAKE AHEC
RALEIGH 27610 919 755-8545
DUKE

AUGHAN, ROSS LEROY, JR. NPM /PD AC
WAKE MEDICAL CENTER 70 70 88
3000 NEW BERN AVENUE
RALEIGH 27610 919 250-8545
U OF NC

UROLOGICAL SURGERY

LLEN, LEROY NS AC
3009 NEW BERN AVE. 46 47 55
PO BOX 14027
RALEIGH 27620 919 231-3320
BOWMAN GRAY

LLEN, ROBERT LEE NS AC
3009 NEW BERN AVE. 79 79 85
PO BOX 14027
RALEIGH 27620 919 832-4448
BOWMAN GRAY

OONE, STEPHEN CHRISTOPHER NS /EM AC
3009 NEW BERN AVE. 65 65 78
PO BOX 14027
RALEIGH 27620 919 832-4448
DUKE

ULLARD, DENNIS EUGENE NS AC
3009 NEW BERN AVE. 75 75 83
PO BOX 14027
RALEIGH 27620 919 231-3320
ST LOUIS U

ULGHUM, JAMES SPENCER, III NS AC
3009 NEW BERN AVE. 71 71 77
PO BOX 14027
RALEIGH 27610 919 832-4448
U OF NC

GARNER, TIMOTHY B. NS AC
3320 WAKE FOREST RD.,STE. 410 83 00 88
RALEIGH 27609 919 850-9911
BOWMAN GRAY

RICH, KENNETH J. NS AC
3320 WAKE FOREST RD. STE. 410 78 79 88
RALEIGH 27609 919 850-9911
ST U OF NY-BUFF

ST. CLAIR, SAMUEL KEITH NS AC
3009 NEW BERN AVE. 81 82 90
RALEIGH 27610 919 832-4448
MED COLL OF VA

OBSTETRICS AND GYNECOLOGY

BATTLE, CONSTANCE Y. OBG AC
3714 BENSON DR. 82 86 87
RALEIGH 27609 919 781-5550
U OF MIAMI

BRUGGERS, BARRY ALAN OBG AC
101 S. W. CARY PKY. STE. 170 80 80 84
CARY 27511 919 467-5941
LA STATE U

CARTER, JEAN W. OBG AC
4420 LAKE BOONE TRAIL,STE. 302 78 78 88
RALEIGH 27607 919 571-1040
U OF NC

FLANAGAN, TONY E. OBG AC
3020 NEW BERN AVE., STE. 460 71 75 88
RALEIGH 27610 919 821-1440
MEHARRY MED COLL

FORTIER, KENNETH JOSEPH OBG AC
4420 LAKE BOONE TR., STE. 303 76 76 85
RALEIGH 27607 919 781-5513
DARTMOUTH U

GAINES, IRA LEWIS OBG AC
4420 LAKE BOONE TR., STE. 304 86 86 83
RALEIGH 27607 919 781-2500
BOWMAN GRAY

GARDNER, JEROME BATCHELOR OBG AC
PO BOX 18568 83 84 80
RALEIGH 27619 919 782-1273
EAST CAROLINA U

GOLDSTON, WILLIAM ROBERT OBG AC
4420 LAKE BOONE TR., STE. 303 63 63 73
RALEIGH 27607 919 781-5510
DUKE

GRANADOS, JUAN L. OBG /MFM AC
3000 NEW BERN AVE. 66 73 88
RALEIGH 27610 919 250-8184
U OF MADRID

GRANT, HUGH JUDD, JR. OBG AC
4420 LAKE BOONE TR., STE. 302 69 69 75
RALEIGH 27607 919 571-1040
U OF NC

GREER, THOMAS BYWATER OBG AC
P. O. BOX 18568 54 54 61
RALEIGH 27619 919 782-1273
BOWMAN GRAY

HAAKENSON, GARY ALVIN OBG AC
3126 BLUE RIDGE RD. 72 72 79
RALEIGH 27612 919 782-3865
BAYLOR

HALL, WARNER LEANDER, JR. OBG AC
P. O. BOX 18568 61 61 69
RALEIGH 27619 919 782-1273
DUKE

HAYES, RICHARD IVAN OBG AC
3320 WAKE FOREST RD. 66 66 75
RALEIGH 27609 919 876-8225
CHIO STATE U

HENDERSON, DAVID YEARDLEY OBG AC
3126 BLUE RIDGE RD. 81 84 85
RALEIGH 27612 919 782-0363
MED COLL OF VA

HOLT, WINDSOR AUSTIN OBG AC
3320 WAKE FOREST RD., STE.120 64 64 71
RALEIGH 27609 919 876-8225
CASE WESTERN RES

KAMM, RICK RANDE OBG AC
3805 COMPUTER DR. 70 71 77
RALEIGH 27609 919 781-6200
U OF IOWA

KURZMANN, RICHARD WALTER OBG AC
4420 LAKE BOONE TR., STE. 301 69 72 78
RALEIGH 27607 919 781-7450
U OF VIRGINIA

LITTLETON, ROBERT ELTON OBG AC
3622 HAWORTH DR. 81 82 85
RALEIGH 27609 919 782-1273
U OF NC

MCKENZIE, SHEPPARD ALLEN, III OBG /IM AC
3805 COMPUTER DRIVE 74 74 79
RALEIGH 27609 919 781-6200
U OF NC

MEROD, MARJORIE E. R. OBG AC
4024 JOHN S. RABATEAU WYND 84 85 89
RALEIGH 27612 919 782-9005
ALBERT EINSTEIN

MILLER, DAVID EDWARD OBG AC
5216 DEERCHASE TR. 73 76 77
WAKE FOREST 27587 919 755-8976
DUKE

MOHR, LINDA CHAPPELL OBG AC
3220 WAKE FOREST RD. 80 81 85
RALEIGH 27609 919 876-8225
U OF NC

MONG, JAMES ARTHUR OBG AC
4420 LAKE BOONE TR., STE. 302 80 83 84
RALEIGH 28607 919 832-5529
U OF CINCINNATI

MULVANEY, GERALD GARFIELD OBG AC
9925 KOUPELA DR. 78 80 83
RALEIGH 27614 919 755-8535
BOSTON U

POOLE, TERRY WAYNE OBG AC
2500 BLUE RIDGE CTR., STE. 401 73 73 79
RALEIGH 27607 919 783-9565
BOWMAN GRAY

PRITCHETT, RILDIA JONES OBG C
4420 LAKE BOONE TR. #301 82 85 90
RALEIGH 27607 919 781-7450
U OF NC

RADFORD, WANDA LEE OBG AC
REX FAMILY BIRTH CTR.,STE. 301 75 75 75
RALEIGH 27607 919 781-7450
U OF NC

RAPPAPORT, ERIC OBG AC
3320 WAKE FOREST RD., #120 82 84 89
RALEIGH 27609
U OF MIAMI

ROBERTS, LEE ANN OBG AC
4420 LAKE BOONE TR., STE. 304 80 85 90
RALEIGH 27607 919 781-2500
WASHINGTON U

RUARK, ROBERT JAMES OBG L/RT
525 WADE AVENUE, APT. #51 31 32 34
RALEIGH 27605 919 832-4722
U OF PENN

SATTERFIELD, BENTON SAPP OBG AC
3126 BLUE RIDGE RD. 62 62 65
RALEIGH 27612 919 782-3865
DUKE

SCHMITT, JOHN WILSON OBG AC
4420 LAKE BOONE TR., STE. 303 83 83 83
RALEIGH 27607 919 781-5510
U TX-SAN ANTONIO

STEPHENSON, SHARON R. OBG AC
101 S. W. CARY PARKWAY #170 84 86 88
CARY 27511 919 467-5941
U OF NC

SWAIM, LINDIAN JOSEPH, JR. OBG AC
2500 BLUE RIDGE RD., STE. 219 73 73 83
RALEIGH 27607 919 782-9005
U OF NC

SWEENEY, CHARLOTTE ATKINSON OBG/GYN AC
3400 EXECUTIVE DR.,STE. 203 83 83 83
RALEIGH 27609 919 954-7200
EAST CAROLINA U

TEASLEY, MYRA LYNN OBG AC
4420 LAKE BOONE TR., STE. 303 85 88 89
RALEIGH 27607 919 781-5510
U OF TENNESSEE

TOSKY, GEORGE MICHAEL OBG AC
2800 BLUE RIDGE BLVD. #206 81 82 86
RALEIGH 27607 919 781-7450
BOWMAN GRAY

92. WAKE COMPONENT SOCIETY (Continued)

WILKERSON, ANNIE LOUISE OBG /GYN L
4420 LAKE BOONE TR. STE. 302 38 38 39
PO BOX 98837
RALEIGH 27607 919 832-5529
MED COLL OF VA

WILLIAMS, RANDALL WATTS OBG AC
3622 HAWORTH DR. 84 88 89
RALEIGH 27609 919 782-1273
U OF NC

WOODRUFF, LEON FESTUS, JR. OBG AC
4420 LAKE BOONE TR., STE. 303 72 72 76
RALEIGH 27607 919 781-5510
BOWMAN GRAY

OCCUPATIONAL MEDICINE

MARTIN, SIDNEY ARNOLD OM /FP S/RT
3141 ESSEX CIRCLE 53 53 57
RALEIGH 27608 919 782-0911
BOWMAN GRAY

ONCOLOGY

BERRY, WILLIAM ROSSER ON /HEM AC
PO BOX 30098 74 78 79
RALEIGH HEM/ONCOLOGY CLI.
RALEIGH 27622 919 781-7070
DUKE

DUNLAP, WILLIAM MARSHALL ON /IM AC
3521 HAWORTH DR. 65 65 73
RALEIGH 27609 919 782-1806
DUKE

ORNITZ, ROBERT DAVID ON /TR AC
4420 LAKE BOONE TRAIL 71 75 79
RALEIGH 27607 919 783-3018
U OF OKLAHOMA

TREMONT, STEPHEN J. ON /HEM AC
PO BOX 30098 74 79 86
RALEIGH 27622 919 781-7070
TUFTS U

YOFFE, ELIZABETH HARRER ON /HEM AC
3100 DURALEIGH RD. 77 80 83
RALEIGH 27612 919 781-7070
U OF FLORIDA

YOFFE, MARK ON /HEM AC
PO BOX 30098 77 80 83
RALEIGH HEM/ONCOLOGY CLI.
RALEIGH 27622 919 781-7070
U OF FLORIDA

OPHTHALMOLOGY

BOARD, ROBERT JEFFREY OPH AC
3320 EXECUTIVE DR. STE. 111 74 77 84
RALEIGH 27609 919 876-2427
DUKE

CHAMBLEE, HUBERT ROYSTER, JR. OPH AC
20 ENTERPRISE STREET 60 60 67
RALEIGH 27607 919 829-1948
DUKE

FOSTER, WILLIAM WADE OPH AC
3320 EXECUTIVE DR., STE. 111 72 72 76
RALEIGH 27609 919 876-2427
BOWMAN GRAY

FRIEDLAND, BETH ROSENTHAL OPH /PA AC
10 PARK PLAZA,STE. 3 79 80 85
PO BOX 12765
RESEARCH TRIANGLE PK 27709 919 549-9135
U OF FLORIDA

GULLEDGE, SIDNEY LOY, III OPH AC
4301 LAKE BOONE TR.,STE. 200 76 76 82
RALEIGH 27607 919 782-5210
BOWMAN GRAY

HAYWOOD, HUBERT BENBURY,JR. OPH L/RT
2109 BANBURY ROAD 41 46 52
RALEIGH 27608 919 782-0236
DUKE

JOHNSON, ALBIN WILLARD OPH AC
2800 BLUE RIDGE BLVD.,STE. 409 58 64 65
RALEIGH 27607 919 781-7400
DUKE

JONES, DAVID HERMAN OPH RT
900 CEDARHURST DR. 59 59 66
RALEIGH 27609 919 876-2618
U OF NC

JOYNER, SUSAN JANE OPH AC
3320 EXECUTIVE DR. STE. 111 84 84 89
RALEIGH 27609 919 876-2427
U OF NC

JOYNER, WALTON KITCHIN, JR. OPH AC
3900 BROWNING PLACE 86 86 90
RALEIGH 27609 919 787-2758
U OF NC

KELLY, MICHAEL WALKER OPH AC
2500 BLUE RDIGE RD.STE.102 83 83 90
RALEIGH 27612 919 781-2127
U TX-SOU.WESTERN

KILEY, JAMES WILLIAM OPH AC
3320 EXECUTIVE DR. 76 76 81
RALEIGH 27609 919 876-2427
U OF CINCINNATI

LOWRY, R. FRANK OPH AC
4024 BARRETT DR., STE. 104 68 68 74
RALEIGH 27609 919 787-3241
U OF NC

MAGOLAN, JEROME JOSEPH, JR. OPH AC
3320 EXECUTIVE DR., STE. 210 81 82 85
RALEIGH 27609 919 872-0572
M C OF WISCONSIN

MARTIN, PHILIP L. OPH AC
3320 EXECUTIVE DR., STE. 210 73 75 76
RALEIGH 27609 919 872-0572
U OF NC

MCGRORY, EDWARD JOSEPH,JR. OPH AC
3900 OLD WAKE FOREST ROAD 74 75 80
RALEIGH 27609 919 872-3242
MED U OF SC

MUNN, ALBERT R., III OPH AC
3900 WAKE FOREST RD. 85 85 90
RALEIGH 27609 919 872-3242
U OF NC

NOAH, VAN BATCHELOR OPH AC
3900 OLD WAKE FOREST RD. 66 66 72
SUITE 104
RALEIGH 27609 919 872-3242
BOWMAN GRAY

ROBINSON, CHARLES HALL, JR. OPH AC
3900 WAKE FOREST RD. STE. 104 75 76 73
RALEIGH 27609 919 872-3242
DUKE

SHEARIN, WILLIAM ARTHUR, SR. OPH AC
2800 BLUE RIDGE BLVD., STE.405 62 62 67
RALEIGH 27607 919 781-7373
DUKE

THORNHILL, GEORGE TUDOR OPH L
720 W. JONES STREET 41 49 50
RALEIGH 27603 919 834-7341
DUKE

WARD, JOHN THOMAS OPH AC
3100 BLUE RIDGE RD., STE. 200 81 83 86
RALEIGH 27612 919 787-2211
U OF OKLAHOMA

WHELISS, JOHN ANGUS OPH AC
2800 BLUE RIDGE BLVD. STE. 407 52 54 57
RALEIGH 27607 919 781-7402
COLUMBIA U

ORTHOPEDIC SURGERY

ANDREW, WALLACE F., JR. ORS /HS AC
3515 GLENWOOD AVE. 75 81 82
PO BOX 10707
RALEIGH 27605 919 781-5600
U OF VIRGINIA

BURROUGHS, PAUL LEACH, JR. ORS AC
3410 EXECUTIVE DRIVE 66 66 71
RALEIGH 27609 919 872-5296
U OF NC

CASTELLOE, THOMAS EDISON ORS AC
P. O. BOX 10707 56 56 61
RALEIGH 27605 919 781-5600
U OF NC

CAUDLE, ROBERT J. ORS AC
PO BOX 10707 81 88 8
RALEIGH 27605 919 781-560
BOWMAN GRAY

DAMERON, THOMAS BARKER, JR. ORS AC
P. O. BOX 10707 47 53 5
RALEIGH 27605 919 781-560
DUKE

DHILLON, TEJPAL SINGH ORS AC
PO BOX 52277 63 73 7
RALEIGH 27612 919 881-017
M C OF AMRITSAR

EDWARDS, GEORGE SADLER, SR. ORS AC
3410 EXECUTIVE DRIVE 57 57 6
RALEIGH 27609 919 872-529
U OF NC

EPNER, RONALD ALAN ORS /HS AC
101 S.W. CARY PARKWAY 76 81 8
CARY 27511 919 467-499
CORNELL U

FAJGENBAUM, DAVID MONIEK ORS AC
3410 EXECUTIVE DRIVE 75 75 8
RALEIGH 27619 919 872-529
TULANE U

MCDANIEL, WILLIAM JASON, JR. ORS AC
P. O. BOX 10707 67 67 7
RALEIGH 27605 919 781-560
U OF NC

MILLER, ORLANDO PHIL ORS AC
P. O. BOX 10707 59 68 6
RALEIGH 27605 919 781-560
COLUMBIA U

MONTGOMERY, STEPHEN PAUL ORS AC
P. O. BOX 10707 74 74 8
RALEIGH 27605 919 781-560
RUSH MED COLL

NELSON, ROBERT BARRY ORS AC
P. O. BOX 10707 65 65 7
RALEIGH 27605 919 781-560
NORTHWESTERN U

PACKER, JOHN WESLEY ORS /HS AC
3515 GLENWOOD AVE. 65 65 7
PO BOX 10707
RALEIGH 27605 919 781-560
BOWMAN GRAY

REIBEL, DONALD BAUMANN ORS AC
P. O. BOX 10707 57 64 6
RALEIGH 27605 919 781-560
INDIANA U

RENDLEMAN, DAVID ATWELL, III ORS AC
321 CAMBRIDGE WOODS WAY 70 70 7
RALEIGH 27608 919 872-529
U OF NC

VENTERS, GEORGE COLE ORS AC
3410 EXECUTIVE DRIVE 71 71 7
RALEIGH 27609 919 872-529
U OF NC

WHITEHURST, LEE ALBERT ORS AC
TRIANGLE SPINE/BACK CARE CTR. 72 72 7
3320 WAKE FOREST RD.STE. 430
RALEIGH 27609 919 876-767
U OF NC

WYKER, ROBERT T. ORS AC
PO BOX 10707 82 84 8
RALEIGH 27605 919 781-560
U OF VIRGINIA

OTOLARYNGOLOGY

BOYCE, STEPHEN EUGENE OTO AC
3010 ANDERSON DR. 82 83 8
RALEIGH 27619 919 787-717
U OF FLORIDA

GARRABRANT, EDGAR CORNELIUS OTO AC
3010 ANDERSON DR. 66 66 7
PO BOX 18946
RALEIGH 27619 919 787-717
U OF NC

GREENE, DENNIS ALAN OTO /HNS AC
3100 DURALEIGH RD. 68 68 9
RALEIGH 27612 919 831-566
WEST VA U

92. WAKE COMPONENT SOCIETY (Continued)

ATTAWAY, ALEXANDER C.,III OTO /HNS AC 65 65 70
3010 ANDERSON DR.
PO BOX 18946
RALEIGH 27619 919 787-7171
U OF NC

IAJORS, ROBERT POWELL, JR. OTO AC 61 61 71
3010 ANDERSON DR.
PO BOX 18946
RALEIGH 27619 919 787-7171
GEO WASHINGTON U

IEDDERS, RUSSELL GLEN OTO AC 84 85 82
3100 BLUE RIDGE RD.
RALEIGH 27607 919 787-1374
U OF NC

ARKER, MICHAEL YOUNG OTO /HNS AC 78 80 76
3100 BLUE RIDGE RD., STE. 201
RALEIGH 27612 919 787-1374
U OF NC

ATTERSON, HUBERT CLIFTON OTO /PSF 74 74 84
P. O. BOX 18946
RALEIGH 27619 919 787-7171
U OF NC

PARROW, NATHANIEL LOUIS OTO AC 57 57 65
3010 ANDERSON DR.
PO BOX 18946
RALEIGH 27619 919 787-7171
U OF NC

HORNHILL, EDWIN HALE OTO /OPH L 38 41 42
720 W. JONES STREET
RALEIGH 27603 919 834-7341
DUKE

'ATANABE, TSUNEO KENT OTO /PSF AC 74 78 83
101 S. W. CARY PARKWAY
CARY 27511 919 467-7380
KEIO GIJUKU U

'HICKER, JAMES HUBERT OTO AC 66 74 82
3010 ANDERSON DRIVE
P. O. BOX 18946
RALEIGH 27619 919 787-7171
U OF NC

'ILKINS, STANLEY A., JR. OTO /HNS AC 82 83 88
3100 BLUE RIDGE RD.
RALEIGH 27607 919 787-1374
U OF NC

'RIGHT, JAMES RHODES OTO /OPH L 40 40 40
3319 WHITE OAK RD.
RALEIGH 27609 919 834-8251
U OF MARYLAND

YCHIATRY

ARRINGER, THAD JONES P AC 53 57 59
3900 BROWNING PL., STE. 201
RALEIGH 27609 919 787-7125
VANDERBILT U

ARRINGER, THADDEUS JONES, JR. P AC 78 78 83
3900 BROWNING PL., STE. 201
RALEIGH 27609 919 787-7125
TULANE U

ETTS, WILMER CONRAD P /ALD AC 48 50 55
920-A PAVERSTONE DR.
RALEIGH 27615 919 847-2624
DUKE

IERMAN, DAVID RALPH P /CHP C 85 86 89
6031 RAMBLING HILL DR.
MORRISVILLE 27560 919 571-7744
SOU IL MED SCH

LACKLEY, ROY JACKSON P /GPM L/RT 53 53 54
4907 QUAIL HOLLOW DR.
RALEIGH 27609 919 733-4506
MCGILL U

RITT, BENJAMIN EARL P L/RT 55 55 60
1209 GLEN EDEN DR.
RALEIGH 27612 919 876-0287
DUKE

ROWN, THOMAS WALTER P /LM AC 78 78 89
920-A PAVERSTONE DR.
RALEIGH 27615 919 847-2624
CASE WESTERN RES

EFALU, SALVADOR JOSEPH P /GER AC 60 60 67
DOROTHEA DIX HOSPITAL
RALEIGH 27611 919 733-5518
LA STATE U

DE MARNEFFE, FRANCIS P AC 50 50 90
3019 FALSTAFF RD.
RALEIGH 27610 919 250-7000
U OF LONDON

GROCE, JAMES GRAY P AC 71 71 80
508 RALPH DR.
CARY 27511 919 733-5540
U OF NC

HARPER, ROBERT NORMENT, SR. P AC 51 51 53
3153-G GLENWOOD PROF. VILL.
RALEIGH 27608 919 782-1555
BOWMAN GRAY

JOHNSON, CHARLES ROSS P AC 65 65 70
4000 BLUE RIDGE RD. STE. 100
RALEIGH 27612 919 781-8539
BOWMAN GRAY

KAYYE, PAUL THOMAS P /CHP AC 62 63 86
101 BLAIR DR., ADAMS BLDG.
RALEIGH 27603 919 733-7640
U OF MIAMI

KUSUMI, YOSHITARO P /PYM AC 61 71 75
1004 DRESSER COURT, STE. 106
RALEIGH 27609 919 876-5530
NIHON U

LANCASTER, MICHAEL STEWART P /CHP AC 75 75 90
1100 NAVAHO DR. STE. 105
RALEIGH 27609 919 872-3851
TULANE U

LARCADE, LEE ALAN P C 85 88 89
1702 PINEVIEW ST.
RALEIGH 27608 919 684-8955
U OF OKLAHOMA

LEIDY, LUANN P /CHP AC 82 86 81
4322 BEECHNUT LANE
DURHAM 27707 919 490-6055
DUKE

MCALLISTER, JAMES GRAY, III P /D AC 60 60 68
1004 DRESSER CT., STE. 108
RALEIGH 27609 919 876-0287
U OF NC

MCKNIGHT, MARTHA ANNE P /CHP AC 81 82 77
4856 LITTLE FALLS DR.
RALEIGH 27609 919 733-6355
DUKE

OSTROW, BARRY SEYMOUR P AC 66 66 74
3900 BROWNING PL. STE. 201
RALEIGH 27609 919 787-7125
U OF MICHIGAN

PEDIADITAKIS, NICHOLAS P. P AC 54 61 61
5100 LEADMINE ROAD
RALEIGH 27612 919 787-0710
U THESSALONIKI

QUINN, CLIFTON LEE P AC 54 54 55
3125 GLENWOOD PROF VILLAGE
RALEIGH NC 27608 919 782-5615
U OF NC

ROLLINS, ROBERT LEROY, JR. P /FPY AC 56 56 60
2500 WAKE DRIVE
RALEIGH 27608 919 733-9142
DUKE

SAAD, MAGED HANNA P /GP AC 61 75 75
3010 FALSTAFF ROAD
RALEIGH 27610 919 821-3101
CAIRO U

SCARBOROUGH, WALTER AVERY, JR. P AC 67 67 75
1004 DRESSER COURT, STE. 101
RALEIGH 27609 919 876-0090
DUKE

SELLERS, BOBBY EUGENE P AC 63 64 64
3900 BROWNING PLACE
RALEIGH 27609 919 787-7125
U OF TENNESSEE

STEINBRUEGGE, JILL M. P AC 78 79 90
3120 HIGHWOODS BLVD.
RALEIGH 27604 919 878-9870
U OF COLORADO

STRATAS, NICHOLAS EMANUEL P /HYP AC 57 60 63
3900 BROWNING PL. #201
RALEIGH 27609 919 787-7125
U OF TORONTO

WEISLER, RICHARD HARRY P AC 76 76 82
3320 EXECUTIVE DR. STE. 216
RALEIGH 27609 919 782-4672
U OF NC

YAMBOR, MARI MARTHA P C 80 81 90
PO BOX 2444
CHAPEL HILL 27515 919 881-5456
WEST VA U

YOUNG, DAVID ALEXANDER P /PYA L 31 31 46
1546 IREDELL DR.
RALEIGH 27608 919 833-4146
HARVARD

ZARZAR, MICHAEL NAKHLEH P AC 84 84 90
3153-G ESSEX CIR.
GLENWOOD PROF. VILL.
RALEIGH 27608 919 782-1555
U OF NC

ZARZAR, NAKHLEH PACIFICO P AC 56 63 64
3153 GLENWOOD PROF. VILL.
BLDG. H
RALEIGH 27608 919 782-1555
AMER.U OF BEIRUT

PEDIATRICS

ALLEN, LOUIS DAVID PD AC 78 81 84
3124 BLUE RIDGE RD. #102
RALEIGH 27612 919 782-0021
MED COLL OF GA

ASKEW, ANNE PRESTON PD AC 56 56 65
4016 BARRETT DR., STE. 101
RALEIGH 27609 919 781-2438
DUKE

AUMAN, GEORGE LOUIS PD AC 68 68 73
3900 BROWNING PLACE
RALEIGH 27609 919 787-0266
BOWMAN GRAY

BERNSTEIN, JERRY CHARLES PD /PDA AC 70 71 76
4905 PROFESSIONAL COURT
RALEIGH 27609 919 872-0250
U OF NC

BROWN, DANIEL ELMER PD AC 65 65 70
3124 BLUE RIDGE RD.,STE. 102
RALEIGH 27612 919 782-0021
U OF NC

BROWN, WALLACE DAVID PD AC 68 68 89
3708 LUBBOCK DRIVE
RALEIGH 27612 919 872-0250
U OF ROCHESTER

BUGG, CHARLES PAULETT PD AC 51 51 57
5807 SENTINEL DR.
RALEIGH 27609 919 779-0777
JOHNS HOPKINS

BURROUGHS, FREDERICK DOUGLAS PD AC 66 69 75
100 SUNNYBROOK ROAD, STE. 202
RALEIGH 27610 919 821-3180
MEHARRY MED COLL

CARR, MARJORIE BARNWELL PD AC 76 76 73
2800 BLUE RIDGE BLVD.,STE. 501
RALEIGH 27607 919 781-7490
U OF NC

COVINGTON, CONNELL PD /GP AC 76 78 79
100 SUNNYBROOK RD. STE. 202
RALEIGH 27610 919 821-3180
U OF NC

D'AVANZO, NICHOLAS JOSEPH PD C 86 89 91
3124 BLUE RIDGE RD.
RALEIGH 27612 919 782-0021
ST. U OF NY-BUFF

EASTWOOD, FREDERICK THOMAS PD L/RT 44 51 52
P. O. BOX 30203
RALEIGH 27622 919 787-1961
TEMPLE U

EDWARDS, ELMO STEPHEN PD AC 63 63 68
2800 BLUE RIDGE BLVD.,STE. 501
RALEIGH 27607 919 781-7490
DUKE

FARLEY, WILLIAM WINFREE PD L 43 47 52
3814 BROWNING PLACE
RALEIGH 27609 919 782-8326
MED COLL OF VA

FLEMING, ROBERT HENRY PD AC 60 60 64
2800 BLUE RIDGE BLVD.,STE 501
RALEIGH 27607 919 781-7490
BOWMAN GRAY

92. WAKE COMPONENT SOCIETY (Continued)

FRANKLIN, EARL RUFFIN PD AC
3803-A COMPUTER DR. 73 75 76
RALEIGH 27609 919 782-5273
U OF NC

GILLESPIE, WILLIAM ALLEN PD AC
3120 HIGHWOODS BLVD. 76 79 90
RALEIGH 27609 919 878-5800
U OF VIRGINIA

GOLDMAN, ALAN LAWRENCE PD AC
2800 BLUE RIDGE BLVD.,STE. 501 63 63 71
RALEIGH 27607 919 781-7490
WASHINGTON U

HOLTKAMP, JOHN HARRY PD AC
4505 FAIR MEADOW LANE 80 83 84
RALEIGH 27607 919 542-4564
NEW YORK U

HUBBARD, WILLIAM COLVIN PD AC
4905 PROFESSIONAL COURT 66 66 73
RALEIGH 27609 919 872-0250
U OF NC

JEFFERS, ROBERT GORDON PD /ADL AC
3803-A COMPUTER DR. 74 74 83
RALEIGH 27609 919 782-5273
TULANE U

KEENEY, RONALD ERIC PD /ID AC
5 MOORE DR., GLAXO, INC. 68 69 78
RESEARCH TRIANGLE PK 27709 919 990-5019
U OF MISSOURI

LEHAN, LEIGH STEELE PD AC
2800 BLUE RIDGE RD., STE. 501 81 84 86
RALEIGH 27607 919 781-7490
U OF NC

MANN, LARRY DOUGLAS PD AC
3803-A COMPUTER DR. 83 83 90
RALEIGH 27609 919 782-5273
MARSHALL U

MCGEARY, SCOTT ALAN PD /ID C
3100 DURALEIGH RD. 77 78 90
RALEIGH 27612 919 881-5485
U OF OREGON

MOSELEY, ROBERT GALLOWAY PD AC
BOX 7304, NCSU-S.H.S. 57 57 62
RALEIGH 27695 919 737-2563
DUKE

MUNT, ROBERT LAWRENCE, JR. PD AC
4505 FAIR MEADOWS LN. #101 77 77 82
RALEIGH 27607 919 787-5495
U OF NC

POOLE, JAMES MORRISON PD /ADL AC
3803-A COMPUTER DR. 76 79 84
RALEIGH 27609 919 782-5273
MED U OF SC

PUGH, VERNON WATSON, JR. PD AC
1321 OBERLIN ROAD 53 53 57
RALEIGH 27608 919 828-4747
JEFFERSON

ROBIE, WILLIAM ADLAI PD AC/RT
348 BUNCOMBE ST. 42 64 66
RALEIGH 27609 919 787-3502
GEO. WASHINGTON U.

SALTER, TERESA PALMER PD AC
101 W. DURHAM ROAD 75 75 80
CARY 27513 919 467-5543
U OF NC

SANDERS, LEE HYMAN PD L/RT
2502 ANDERSON DRIVE 42 42 46
RALEIGH 27608 919 787-9888
TEMPLE U

STILL, JAMES GORDON PD AC
BOX 3675, DUMC 78 81 00
DURHAM 27710 919 477-4297
BOWMAN GRAY

THULLEN, JAMES DONALD PD /NPM AC
2311 LAKE DRIVE 70 70 82
RALEIGH 27609 919 755-8545
DES MOINES OST

VANDERBERRY, ROBERT C., JR. PD /ALD AC
4700 SIX FORKS RD. STE. 220 68 68 88
RALEIGH 27609 919 881-0585
U OF NC

WARE, JULIE LYNNE PD AC
3100 DURALEIGH RD. 81 82 88
RALEIGH 27612 919 881-5300
BAYLOR

WILEY, JERRY WILLIAM PD AC
PO BOX 40395 74 75 78
RALEIGH 27629 919 733-2833
DUKE

WINSLOW, FRANCIS EDWARD, JR. PD AC
3124 BLUE RIDGE RD. STE. 102 53 53 61
RALEIGH 27612 919 782-0021
DUKE

WOLFE, ANN FIERRO PD AC
6912 HUNTERS WAY 61 61 83
RALEIGH 27615 919 733-3816
TEMPLE U

WOOTEN, ELEANOR JANE H. PD /PH L/RT
904 WILLIAMSON DRIVE 42 44 46
RALEIGH 27608 919 832-4097
DUKE

PUBLIC HEALTH

BETHEL, MILLARD BAIMBRIDGE PH L/RT
400 AVINGER LANE-409 36 36 39
DAVIDSON 28036 704 896-1409
U OF TENNESSEE

BURROUGHS, RUTH REUBEN PH /PD L/RT
6413 MARGATE COURT 37 37 69
RALEIGH 27612 919 781-5015
U OF NEBRASKA

KOOMEN, JACOB, JR. PH L/RT
909 DOGWOOD LANE 45 58 60
RALEIGH 27607 919 834-4355
U OF ROCHESTER

LEVINE, RONALD H. PH /PD AC
2404 WHITE OAK ROAD 59 62 66
RALEIGH 27609 919 782-0838
DOWNSTATE ME CTR

MORROW, SARAH TAYLOR PH /PD AS/RT
3304 WADE AVE. 44 45 61
RALEIGH 27607 919 851-8888
U OF MARYLAND

RHYNE, JIMMIE LEE PH/PD AS/RT
7813 HARDWICK DR. 48 48 56
RALEIGH 27615 919 847-1380
U OF MARYLAND

STOODT, GEORJEAN PH /GPM AC
PO BOX 27687 79 79 88
NC DIV. OF ADULT HEALTH
RALEIGH 27611 919 733-7081
U OF CINCINNATI

WESTER, THADDEUS BRYAN PH /PD AC
1001 BRIGHTHURST DR., APT. 101 51 53 54
RALEIGH 27605 919 733-4984
DUKE

WILSON, WILLIAM LENOIR PH L/RT
WEDGEWOOD APT. #23 26 59 60
740 E. SMALLWOOD DR.
RALEIGH 27605 919 828-2940
BAYLOR

PHYSICAL MEDICINE AND REHABILITATION

GWINN, MICHAEL DALE PM AC
3320 WAKE FOREST RD., STE. 430 86 87 90
RALEIGH 27609 919 876-7676
OHIO STATE U

MORRELL, ROBERT X., JR. PM AC
3000 NEW BERN AVE. 83 84 86
WAKE REHABILITATION HOSPITAL
RALEIGH 27610 919 250-8757
U OF LOUISVILLE

PLASTIC SURGERY

DAVIDIAN, VARTAN AMBAR, JR. PS /GS AC
1112 DRESSER COURT 67 67 75
RALEIGH 27609 919 872-2616
U OF NC

DAVIS, GLENN MILLER PS AC
4301 LAKE BOONE TR., STE. 205 74 75 87
RALEIGH 27607 919 881-0077
MED U OF SC

GARSIDE, WILLIAM BLAKE PS A
1112 DRESSER COURT 64 64 7
RALEIGH 27609 919 872-26
ST LOUIS U

HANNA, DONALD PAUL PS /GS A
103 BAINES COURT 79 82
CARY 27511 919 467-19
WAYNE STATE U

LAMBETH, WILLIAM ARNOLD, III PS /GS A
1112 DRESSER COURT 71 71
RALEIGH 27609 919 872-26
U OF NC

OSCHWALD, DONALD L.A., JR. PS A
3320 EXECUTIVE DR. STE. 222 78 79
RALEIGH 27609 919 850-02
U OF NEW MEXICO

RUSSELL, ROGER BIVINS PS /GS A
4301 LAKE BOONE TR., STE. 205 76 80
RALEIGH 27607 919 881-00
BOWMAN GRAY

VALONE, JAMES AUSTIN PS /GS
2800 BLUE RIDGE BLVD.,#304 36 47
RALEIGH 27607 919 781-74
ST U OF NY-BUFF

WINSLOW, ROBERT BROWN PS /GS A
2500 BLUE RIDGE RD. #301 62 62
RALEIGH 27607 919 571-80
COLUMBIA U

PATHOLOGY, ANATOMICAL AND CLINICAL

AVERY, FRANK WALTON PTH A
RALEIGH COMMUNITY HOSP. 67 67
PO BOX 28280
RALEIGH 27611 919 954-31
U OF NC

BENSON, JOHN DEWITT PTH A
4420 LAKE BOONE TRAIL 78 79
RALEIGH 27607 919 783-30
U OF NC

CARTER, TIMOTHY ROBERT PTH
4420 LAKE BOONE TRAIL 84 85
REX HOSPITAL
RALEIGH 27607 919 783-30
U OF VIRGINIA

CHIAVETTA, STEPHEN V. PTH /HEM A
4420 LAKE BOONE TRAIL 69 70
RALEIGH 27607 919 783-30
M C OF WISCONSIN

COPELAND, DANA DERWARD PTH /NA A
10004 GRADY CIRCLE 72 73
RALEIGH 27609 919 755-82
DUKE

EDWARDS, JAMES RONALD PTH A
1800 BRASSFIELD RD. 58 58
RALEIGH 27614 919 755-82
U OF NC

KAASA, LAURIN JUUL PTH
3312 LANDOR RD. 42 61
RALEIGH 27609 919 755-82
U OF MINN

KANICH, ROBERT EMIL PTH A
4420 LAKE BOONE TRAIL 62 62
RALEIGH 27607 919 783-30
MED COLL OF VA

LEGRAND, GORDON BUCK PTH A
3000 NEW BERN AVENUE 65 65
RALEIGH 27610 919 755-82
U OF NC

PATE, DEWEY HARRIS PTH A
WAKE MEMORIAL HOSPITAL 58 66
RALEIGH 27610 919 755-82
U OF NC

SCARBOROUGH, DAWSON EMERSON PTH A
WAKE CO. MED. CTR.,-PATH. 62 62
RALEIGH 27610 919 755-82
U OF NC

SORGE, JOHN PHILLIP PTH A
4420 LAKE BOONE TRAIL 82 82
DEPT. OF PATHOLOGY
RALEIGH 27607 919 783-30
U OF ROCHESTER

92. WAKE COMPONENT SOCIETY (Continued)

LMONARY DISEASES

URR, ROBERT ALAN PUD /IM AC
3320 OLD WAKE FOREST RD. 80 81 88
RALEIGH 27609 919 872-4850
ST U OF NY-BUFF

UNSTLING, TED RICHARD PUD /IM AC
3320 WAKE FOREST RD. 68 68 75
RALEIGH 27609 919 872-4850
DUKE

YCHOANALYSIS

ORNWALL, THOMAS PAUL PYA /CHP AC
4601 LAKE BOONE TRAIL #2A 70 72 83
RALEIGH 27607 919 782-4954
NORTHWESTERN U

OWIE, JOHN SANDALL PYA /P AC
3129 ESSEX CIRCLE 58 64 64
RALEIGH 27608 919 782-0616
U OF NC

DIOLOGY

ELLA, JOHN ROBERT R AC
PO BOX 19509 64 64 70
NORTH HILLS STATION
RALEIGH 27619 919 833-1407
U OF NC

ESIMONE, ROBERT ALFRED R C
315 LOCHSIDE DR. 61 64 90
CARY 27511 919 467-5900
TUFTS U

SHELMAN, THOMAS CARL R AC
3909 LEWIS P OLDS WYND 67 68 75
RALEIGH 27612 919 755-3023
BOWMAN GRAY

ENKINS, ALBERT MILTON R AC
3614 HAWORTH DR. 47 53 53
RALEIGH 27609 919 832-8080
U OF CINCINNATI

ERLMUTT, LOUIS MORRIS R /DR C
3821 MERTON DR. 77 77 90
WAKE RADIOLOGY CONSULTANTS,PA
RALEIGH 27609 919 787-8199
U OF NC

OPE, CHARLES V. R AC
9602 LESLIE DR. 76 76 75
CHAPEL HILL 27516 919 787-8221
U OF NC

ECRIST, RANDY D. R C
4623 WOODRIDGE 80 80 88
RALEIGH 27612 919 738-8222
INDIANA U

PRUNT, WM HUTCHINSON, III R /NM AC
6508 BROOKHOLLOW DR. 45 48 53
RALEIGH 27615 919 787-8199
HARVARD

/OODARD, SABRA ALDERMAN R /NM AC
1825 ST. MARY'S STREET 76 76 84
RALEIGH 27608 919 755-3023
U OF NC

/ORTH, THOMAS CLARKSON R L/RT
500 LAKE BOONE TRAIL 36 36 49
RALEIGH 27608 919 787-6449
HARVARD

RHEUMATOLOGY

FREEMAN, DOUGLAS G., JR. RHU /AI AC
3831 MERTON DRIVE 68 68 77
RALEIGH 27609 919 781-9633
DUKE

KOPP, ELLIOT JOSEPH RHU /AI AC
3831 MERTON DR. 73 73 86
RALEIGH 27609 919 781-9633
SUNY-SYRACUSE

ROBERTS, SURRY PARKER RHU /IM RT
120 WOODBURN RD. 66 66 76
RALEIGH 27605 919 828-2245
U OF NC

STRADER, KYLE WOODROW RHU /A AC
3831 MERTON DR. 81 81 86
RALEIGH 27609 919 781-9633
WEST VA U

SVARA, CLAUDIA J. RHU /IM AC
3320 WAKE FOREST RD. 83 84 88
RALEIGH 27609 919 878-0347
U OF NC

THERAPEUTIC RADIOLOGY

ANDERSON, ROGER FABIAN, JR. TR /ON AC
4420 LAKE BOONE TRAIL 81 85 90
REX CANCER CENTER
RALEIGH 27607 919 783-3018
DUKE

CAVANAUGH, PATRICK JOSEPH TR AC
NASH DAY HOSPITAL 51 51 71
CURTIS-ELLIS DR.
ROCKY MOUNT 27801 919 783-3018
ST LOUIS U

HOFFMAN, LEROY G., JR. TR /PD AC
PO BOX 10407 75 75 88
TRIANGLE ONCOLOGY SERVICES
RALEIGH, 27605 919 783-3018
BOWMAN GRAY

SCARANTINO, CHARLES WALTER TR AC
4420 LAKE BOONE TR. 73 74 82
REX CANCER CTR.
RALEIGH 27607 919 783-3018
BOWMAN GRAY

THORACIC SURGERY

ALEXANDER, LEON GEORGE, JR. TS /CDS AC
2800 BLUE RIDGE BLVD.,STE.306 73 73 90
RALEIGH 27607 919 782-7900
DUKE

ATKINSON, ALVAN WILLIAM TS AC
3400 EXECUTIVE DR. STE. 102 71 74 80
RALEIGH 27609 919 872-8080
JEFFERSON

UROLOGICAL SURGERY

BRADSHAW, PRESTON HATCHER, JR. U AC
1200 KERSHAW DR. 60 60 67
RALEIGH 27609 919 783-6687
DUKE

DANIEL, THOMAS BRANTLEY U L/RT
110 SELMA RD. 43 43 52
PO BOX 845
WENDELL 27591 919 365-5550
BOWMAN GRAY

FOX, POWELL GRAHAM, JR. U S/RT
PO BOX 28280 52 59 60
RALEIGH COMMUNITY HOSP.
RALEIGH 27611 919 790-0036
MED COLL OF VA

KANE, RICHARD DOUGLAS U AC
4301 LAKE BOONE TR.,STE. 300 71 73 78
WAKE UROLOGICAL
RALEIGH 27607 919 782-1255
NORTHWESTERN U

LEATHERMAN, HUGH K., JR. U AC
3901 COMPUTER DR. 81 83 88
RALEIGH 27609 919 781-5104
MED U OF SC

LEBENSON, BERNARD STEPHEN U C
101 SW CARY PARKWAY,STE. 200 77 79 91
CARY 27511 919 467-3203
MED COLL OF VA

LEET, DOUGLAS CHARLES U AC
3320 WAKE FOREST RD., STE. 100 75 77 82
RALEIGH 27609 919 790-0036
U OF CHICAGO

LUCEY, DONALD TRUESDELL U AC
2800 BLUE RIDGE BLVD. STE. 403 63 63 71
RALEIGH 27607 919 781-7113
DUKE

MCCLURE, MARK WARREN U AC
3320 WAKE FOREST RD.,STE. 100 76 76 89
RALEIGH 27609 919 790-0036
INDIANA U

PARNELL, JEROME PATRICK,II U AC
3901 COMPUTER DR. 74 75 82
RALEIGH 27609 919 781-5104
DOWNSTATE ME CTR

RHODES, JOHN FLINT U AC
2800 BLUE RIDGE BLVD. STE. 403 62 62 70
RALEIGH 27607 919 781-7113
U OF NC

STAFFORD, STEVEN JAMES U AC
3320 WAKE FOREST RD. #100 76 76 83
RALEIGH 27609 919 790-0036
U OF CHICAGO

TORTORA, FRANK L.,JR. U AC
101 S. W. CARY PARKWAY 77 79 87
CARY 27511 919 467-3203
EMORY U

UNGER, HENRY ALAN U AC
101 S. W. CARY PARKWAY 72 76 81
CARY 27511 919 467-3203
VANDERBILT U

VASCULAR SURGERY

ARCHIE, JOSEPH PATRICK, JR. VS AC
3020 NEW BERN AVE. #560 68 68 82
RALEIGH 27610 919 833-8404
U OF NC

93. WARREN COMPONENT SOCIETY

FFICERS—**President:** Kirit D. Trivedi, M.D., 546 W. Ridgeway St., Warrenton 27589 (919 257-2346)

95. WATAUGA COMPONENT SOCIETY

FFICERS—**President:** Michael Douglas, M.D., 301 Birch St., Boone 28607 (704 264-4691)
Secretary: Harold Frazier, M.D., 702 State Farm Rd., Boone 28607 (704 264-2340)

OLESCENT MEDICINE

ERRICK, WILLIAM ADAM, JR. ADL /GP AC
ASU HEALTH SERVICES 65 65 78
BOONE 28608 704 262-3100
MED U OF SC

ANESTHESIOLOGY

DOUGLAS, MICHAEL ERIN AN AC
301 BIRCH STREET 72 73 80
BOONE 28607 704 264-4691
U. OF ARIZONA

GEORGE, LYNN DARCY AN /FP AC
PO BOX 304 56 59 64
BLOWING ROCK 28605 704 295-3633
GEO WASHINGTON U

95. WATAUGA COMPONENT SOCIETY (Continued)

RAY, HUGH LEE — AN 50 AC 50 90
HOUND EARS CLUB
EVERGREEN DRIVE, BOX 188
BLOWING ROCK 28605 — 704 963-4405
U OF TENNESSEE

DERMATOLOGY

GARNER, JO FRANCIS, II — D 76 AC 78 82
204 DOCTOR'S DR.
BOONE 28607 — 704 264-4553
U OF SOU ALA

STANLEY, RONALD JAY — D 72 AC 72 81
204 DOCTORS DRIVE
BOONE 28607 — 704 264-4553
U OF NC

DIAGNOSTIC RADIOLOGY

CZERMAK, CHARLES LOUIS, JR. — DR 66 AC 66 75
P. O. BOX 1781
BOONE 28607 — 704 264-6984
EMORY U

VANCE, THOMAS DOYLE — DR 56 AC 56 71
904 STATE FARM ROAD
PO BOX 1097
BOONE 28607 — 704 264-6984
DUKE

FAMILY PRACTICE

DAVANT, CHARLES, III — FP /GER 72 AC 72 77
RT. #2, BOX 5, CHESTNUT DR.
BLOWING ROCK 28605 — 704 295-3116
U OF NC

DAVANT, CHARLES, JR. — FP /OPH 45 L 48 48
P. O. BOX 8
BLOWING ROCK 28605 — 704 295-3116
MED U OF SC

DAVIS, JOHN D., JR. — FP /GER 78 AC 79 75
P. O. BOX 8
BLOWING ROCK 28605 — 704 295-3116
U OF NC

LIESEGANG, GLEN R. — FP 83 AC 83 88
PO BOX 8
BLOWING ROCK 28605 — 704 295-3116
U OF KENTUCKY

SMITH, WILLIAM M. — FP 50 AC 50 88
815 E. KING STREET
BOONE 28607 — 704 264-3521
U OF MICHIGAN

GENERAL PRACTICE

HAGAMAN, LEN DOUGHTON — GP 36 L/RT 36 38
300 CHERRY DR.
BOONE 28607 — 704 264-8414
U OF PENN

GENERAL SURGERY

DEAN, CLAYTON CLEWIS — GS /VS 60 AC 60 70
702 STATE FARM RD.
BOONE 28607 — 704 264-2340
TULANE U

FRAZIER, HAROLD NICHOLS, JR. — GS /VS 82 AC 82 81
WATAUGA SURGICAL GROUP, PA
STATE FARM RD.
BOONE 28607 — 704 264-2340
BOWMAN GRAY

FURMAN, LOWELL BENJAMIN — GS /CDS 55 AC 63 63
STATE FARM ROAD
BOONE 28607 — 704 264-2340
U OF TENNESSEE

INTERNAL MEDICINE

BRANDON, HENRY ALLEN, JR. — IM /EM 70 AC 70 80
RT. #4, BOX L30-B
BOONE 28607 — 704 264-3308
BOWMAN GRAY

SYKES, CHARLIE LOUIS, JR. — IM 77 AC 77 79
250 DOCTORS DRIVE
BOONE 28607 — 704 264-6362
BOWMAN GRAY

TAYLOR, RUSSELL CARL — IM /NEP 64 AC 64 70
250 DOCTORS DRIVE
BOONE 28607 — 704 264-6362
U OF NC

NUCLEAR MEDICINE

HANNA, LINDA J. — NM /GS 85 C 87 83
PO BOX 526
BLOWING ROCK 28605 — 704 295-7840
BOWMAN GRAY

OBSTETRICS AND GYNECOLOGY

JACKSON, ROBERT B., II — OBG 79 AC 83 89
207 LONGVUE
BOONE 28605 — 704 262-9696
U OF NC

MARCHESE, JOHN RICHARD — OBG 61 AC 61 71
40 DOCTORS DR.
BOONE 28607 — 704 264-9067
GEORGETOWN U

TRATHEN, WILLIAM THOMAS — OBG 64 AC 64 70
20 DOCTORS PARK
BOONE 28607 — 704 264-1232
U OF TORONTO

OBSTETRICS

FREEMAN, JOHN JACKSON — OBS /GYN 69 AC 70 90
907 STATE FARM RD.
BOONE 28607 — 704 264-9208
MED COLL OF GA

OPHTHALMOLOGY

ATKINS, WILLIAM SHAFFER — OPH 71 AC 71
907 STATE FARM ROAD
BOONE 28607 — 704 262-15
BOWMAN GRAY

HARMON, RAYMOND HARRIS — OPH 36 L/F 36
120 HIGHLAND AVENUE
BOONE 28607 — 704 264-86
MED COLL OF VA

ORTHOPEDIC SURGERY

FLEMING, STEPHEN G. — ORS 80 A 81
30 DOCTORS PARK
BOONE 28607 — 704 264-11
BOWMAN GRAY

HERRING, WILLIAM ARTHUR, JR. — ORS 65 A 65
30 DOCTOR'S PARK
BOONE 28607 — 704 264-11
MED U OF SC

KADYK, JAN MARC — ORS 69 A 70
30 DOCTOR'S PARK
BOONE 28607 — 704 264-11
U OF KANSAS

WALLER, TED JAMES — ORS 66 A 67
30 DOCTOR'S PARK
BOONE 28607 — 704 264-11
NORTHWESTERN U

PEDIATRICS

GEIGER, PATRICIA — PD 78 A 00
STUDENT HEALTH SERVICE
APPALACHIAN STATE UNIV.
BOONE 28608 — 704 262-31
BOWMAN GRAY

THORACIC SURGERY

FURMAN, RICHARD WARREN — TS /GS 66 A 66
702 STATE FARM ROAD
BOONE 28607 — 704 264-23
MED COLL OF GA

UROLOGICAL SURGERY

HAMBY, JAMES LAWRENCE — U 67 A 68
WATAUGA MED. ARTS. BLDG.
BOONE 28607 — 704 264-51
U OF MARYLAND

96. WAYNE COMPONENT SOCIETY

OFFICERS—**President:** Larry C. Nickens, M.D., 2706 Medical Office Place, Goldsboro 27530 (919 734-4736)
Secretary: H. N. Krishnaprasad, M.D., 2400 Wayne Memorial Dr., Goldsboro 27530 (919 735-9557)
Executive Secretary: Peggy G. Potter, 2700 Wayne Mem. Dr., Goldsboro 27530 (919 731-6133)

ANESTHESIOLOGY

CECIL, STEPHEN GERARD — AN 81 AC 82 84
607 WOODBERRY DR.
GOLDSBORO 27530 — 919 731-6089
U OF KENTUCKY

LONG, RONALD MORGAN — AN 81 AC 81 84
1717 W. NEW HOPE RD.
GOLDSBORO 27530
U OF TENNESSEE

CARDIOVASCULAR DISEASES

GUPTA, JAGMOHAN DASS — CD /IM 66 AC 66 74
2704 MEDICAL OFFICE PLACE
GOLDSBORO 27530 — 919 736-4724
M C OF PUNJAB U

CHILD PSYCHIATRY

KOHLI, ASHA KIRAN — CHP /P 72 AC 78 86
505 PARKWOOD LANE
GOLDSBORO 27530 — 919 736-0203
GSV MED COLLEGE

DERMATOLOGY

HAVERKAMP, JOHN — D 71 AC 77 8
619 PARK AVE.
GOLDSBORO 27530 — 919 734-094
U OF AMSTERDAM

JENNINGS, JOHN LEE, JR. — D 78 AC 83 8
BOX 1399, 1100 E. ASH ST.
GOLDSBORO 27533 — 919 734-094
EASTERN VA

96. WAYNE COMPONENT SOCIETY (Continued)

WOLFE, HAROLD EUGENE D L/RT
117 CASHWELL DRIVE 43 46 46
GOLDSBORO 27534 919 735-3646
MED COLL OF VA

DIAGNOSTIC RADIOLOGY

BRENTON, BRADLEY CLARK DR AC
2700 MEDICAL OFFICE PLACE 79 80 85
GOLDSBORO 27530 919 734-1866
U OF IOWA

STRICKLAND, NIGEL JOHN DR AC
2700 MEDICAL OFFICE PLACE 59 70 78
GOLDSBORO 27530 919 734-1866
CAMBRIDGE U

EMERGENCY MEDICINE

BATEMAN, WALLACE BRYSON, JR. EM AC
309 WALNUT CREEK DRIVE 76 76 79
GOLDSBORO 27534 919 778-6205
U OF NC

KNUTSON, THOMAS MARVIN EM /FP AC
P. O. BOX 10867 79 80 85
GOLDSBORO 27530 919 731-6060
U OF MINN

POTTS, FREDERICK LATHAM, III EM AC
RT. 1 BOX 325 84 85 81
DUDLEY 28333 919 736-7599
EAST CAROLINA U

SMITH, LLOYD HAMLIN EM AC
RT. 9, BOX 241-F 75 78 87
GOLDSBORO 27534 919 736-1110
MED. COLL. OF VA

STOCKDALE, WAYNE HARROP EM /GS L/RT
715 CRESCENT DR. 45 52 53
SMITHFIELD 27577 919 934-8348
U OF LOUISVILLE

FAMILY PRACTICE

BENNETT, PAUL CLIFFORD, JR. FP AC
2400 WAYNE MEM. DR., STE. B 55 55 59
GOLDSBORO 27530 919 735-1251
DUKE

BOMBATEPE, VAMIK FP AC
204 N. HERMAN STREET 51 51 74
GOLDSBORO 27530 919 735-7580
U OF ANKARA

DRUMMOND, JACK NEWTON FP AC
GRANTHAM MEDICAL CLINIC 57 57 62
RT. 1, BOX 100-C
GOLDSBORO 27530 919 689-2222
BOWMAN GRAY

EGUEZ, JORGE FP AC
108 S. ANDREWS AVE. 54 55 87
GOLDSBORO 27530 919 734-6992
U CENTRAL QUITO

GALFO, MARK STEPHEN FP AC
409 PLANTATION PL. 85 86 90
GOLDSBORO 27534 919 736-5172
ORAL ROBERTS U

GRIFFIN, ASHTON THOMAS, III FP AC
2400 WAYNE MEMORIAL DRIVE 58 58 63
GOLDSBORO 27530 919 735-8601
DUKE

KORNEGAY, HERVY BASIL, SR. FP AC
238 SMITH CHAPEL ROAD 57 57 57
MOUNT OLIVE 28365 919 658-4954
BOWMAN GRAY

LAMBERT, JAMES ROYALL FP AC
130 N. CENTER ST. 78 78 78
MOUNT OLIVE 28365 919 658-4954
BOWMAN GRAY

MEYER, ROBERT SWENSON FP AC
208 N. HERMAN ST. 74 75 79
GOLDSBORO 27530 919 734-5600
TEMPLE U

SHACKELFORD, ROBERT HILLIARD FP AC
238 SMITH CHAPEL ROAD 47 48 50
MOUNT OLIVE 28365 919 658-4954
BOWMAN GRAY

GENERAL PRACTICE

BLACKMAN, JESSE AYCOCK GP AC
109 S. SYCAMORE STREET 73 73 76
FREMONT 27830 919 242-6171
U OF NC

LE, TIN TRONG GP AC
116 POINT SHORE DR. 65 78 86
GOLDSBORO 27534 919 778-0851
SAIGON U

LOWNES, MILTON MARKLEY, JR. GP L/RT
PO BOX 188 47 51 52
DUDLEY 28333 919 658-2505
U OF LOUISVILLE

NATION, ROY GLEN GP /IM AC
407 N. HERMAN STREET 60 65 00
GOLDSBORO 27530 919 735-6261
LA STATE U

PATE, WILLIAM HENRY GP AC
P. O. BOX 129 48 49 50
PIKEVILLE 27863 919 242-5271
MED COLL OF VA

SANFORD, VIRGINIA OATES GP /PD AC
811 SIMMONS ST. 56 56 63
PO BOX 146
GOLDSBORO 27530 919 734-8242
DUKE

SASSER, PATRICK HENRY GP AC
100 E. LOCKHAVEN DRIVE 55 55 59
GOLDSBORO 27534 919 734-2924
BOWMAN GRAY

†TRACHTENBERG, WILLIAM GP
239 S. HILLCREST DRIVE 39 46 47
DECEASED--11-12-90
GOLDSBORO 27530 919 734 -0956
DUKE

TYNDALL, HUBERT DURWOOD GP AC
2400 WAYNE MEMORIAL DRIVE 54 54 56
GOLDSBORO 27530 919 734-4845
U OF NC

GENERAL SURGERY

BERKELEY, SCOTT BRUCE, JR. GS AC
2400 WAYNE MEM. DR. STE. E 53 53 60
GOLDSBORO 27530 919 735-6021
U OF MARYLAND

BLAND, RALPH WINGATE GS /TS AC
2400 WAYNE MEM.DR.,STE.J 52 52 60
GOLDSBORO 27530 919 734-5010
BOWMAN GRAY

GARCIA, GILBERT JOSEPH, JR. GS /VS AC
1008 E. ASH STREET 78 78 85
GOLDSBORO 27530 919 734-6414
U TX-SAN ANTONIO

GUIJARRO, JOSE JULIO, JR. GS /TS C
1008 E. ASH ST. 82 83 90
GOLDSBORO 27530 919 734-1141
U OF OKLAHOMA

MILLER, WALTON H., JR. GS /GYN L/RT
618 BROOKWOOD LANE 41 41 48
GOLDSBORO 27530 919 734-1141
U OF CINCINNATI

RUSSELL, DOUGLAS MACARTHUR GS AC
304 GLEN OAK DRIVE 67 67 75
GOLDSBORO 27530 919 734-5010
U OF NC

THOMPSON, WINFIELD LYNN GS L/RT
216 S. HILLCREST DRIVE 38 38 46
GOLDSBORO 27540 919 734-2610
U OF MARYLAND

GYNECOLOGY

PARKER, TALBOT FORT, JR. GYN AC
102 HANDLEY PARK CT. 51 51 57
GOLDSBORO 27534 919 734-3344
JEFFERSON

INTERNAL MEDICINE

DALE, GROVER CLEVELAND IM L
3293 RANDY ROAD 25 25 27
LANCASTER, PA 17601 717 898-8033
U OF PENN

LOOMER, LANCE IM /ON AC
203 COX BLVD. 83 85 80
GOLDSBORO 27534 919 734-9455
BOWMAN GRAY

MCLAMB, SAMUEL BAGGETT, JR. IM AC
201 COX BOULEVARD 75 77 73
GOLDSBORO 27530 919 734-9455
BOWMAN GRAY

NEWELL, HOWARD WILSON, JR. IM AC
2400 WAYNE MEM. DR. 84 00 82
GOLDSBORO 27530 919 734-4845
U OF NC

STACKHOUSE, WILLIAM JAMES IM /GER AC
201 COX BLVD. 76 77 81
GOLDSBORO 27530 919 734-9455
EMORY U

OBSTETRICS AND GYNECOLOGY

BANDY, LAWRENCE C. OBG /ON C
102 HANDLEY PARK CT. 77 81 87
GOLDSBORO 27534 919 734-3344
DUKE

CAMPBELL, WALKER HAWES OBG AC
102 HANDLEY PARK CT. 63 63 73
GOLDSBORO 27534 919 734-3344
MED COLL OF VA

GOODEN, MICHAEL DEAN OBG AC
102 HANDLEY PARK CT. 73 74 77
GOLDSBORO 27534 919 734-3344
U OF NC

LIES, STEPHEN CRAIG OBG AC
102 HANDLEY PARK CT. 76 79 81
GOLDSBORO 27530 919 734-3344
DUKE

PALMERI, RUSSELL F. OBG AC
1201-C WAYNE MEM. DRIVE. 80 78 88
GOLDSBORO 27534 919 735-3464
GEORGETOWN U

POWELL, E. CHARLES OBG L
100 WOOTEN POINT ROAD 35 35 37
GOLDSBORO 27530 919 778-2692
U OF PENN

ONCOLOGY

ATKINS, JAMES NORMAN ON /IM AC
203 COX BLVD. 76 77 85
GOLDSBORO 27534 919 734-9455
BOWMAN GRAY

OPHTHALMOLOGY

ETHERINGTON, JOHN L. OPH /OTO L
2709 MEDICAL OFFICE PLACE 36 36 47
GOLDSBORO 27530 919 735-3701
QUEENS U

FORREST, TERRY LEE OPH AC
PO BOX 10907 82 84 80
GOLDSBORO 27532 919 734-8440
U OF NC

TEASLEY, BARRY HOYLE OPH AC
P. O. BOX 10907 78 82 75
103 COX BLVD.
GOLDSBORO 27532 919 734-8440
U OF NC

ZWERLING, CHARLES SAMUEL OPH /A AC
GOLDSBORO EYE CLINIC 77 81 82
2709 MEDICAL OFFICE PL.
GOLDSBORO 27530 919 736-3937
U OF BOLOGNA

96. WAYNE COMPONENT SOCIETY (Continued)

ORTHOPEDIC SURGERY

GRANT, JOSEPH DURHAM — ORS AC
2701 MEDICAL OFFICE PLACE — 79 79 85
GOLDSBORO 27530 — 919 736-2157
U OF TX-HOUSTON

HARVIN, ALLAN BRABHAM — ORS /AM RT
RT. #7, BOX 54 — 68 68 76
GOLDSBORO 27530 — 919 734-1930
BOWMAN GRAY

MCLAMB, JOSEPH TIMOTHY — ORS AC
2701 MEDICAL OFFICE PLACE — 67 67 76
GOLDSBORO 27530 — 919 736-2157
U OF NC

PEDRAZA, HECTOR MANUEL — ORS AC
2701 MEDICAL OFFICE PL. — 82 83 89
GOLDSBORO 27530 — 919 736-2157
BOWMAN GRAY

ROCKWELL, DAVID ALLEN — ORS AC
2701 MEDICAL OFFICE PLACE — 74 74 80
GOLDSBORO 27534 — 919 736-2157
U OF NC

OTOLARYNGOLOGY

WHITLEY, DANIEL, JR. — OTO /HNS AC
2707 MEDICAL OFFICE PL. — 83 84 80
GOLDSBORO 27534 — 919 735-9146
EAST CAROLINA U

WILSON, A. ROSS, JR. — OTO AC
2707 MEDICAL OFFICE PLACE — 74 75 79
GOLDSBORO 27534 — 919 735-9146
TEMPLE U

PSYCHIATRY

GAGLIANO, LOUIS ANTHONY — P /GER AC
P. O. BOX 1975 — 71 72 77
GOLDSBORO 27530 — 919 734-8604
U OF LOUVAIN

HOEPER, EDWIN W. — P AC
713 SIMMONS ST. — 65 66 88
PO BOX 11389
GOLDSBORO 27530 — 919 736-4722
NORTHWESTERN U

MALEKPOUR, BAHMAN — P AC
2805 MCLAMB PL. — 64 64 75
PO BOX 1342
GOLDSBORO 27533 — 919 734-2222
U OF HAMBURG

PEDIATRICS

FISHER, JOHN APFEL — PD AC
104 CASHWELL DR. — 52 57 85
GOLDSBORO 27534 — 919 830-3426
HAHNEMANN

MANESS, RUBIN FRANKLIN — PD /A AC
2706 MEDICAL OFFICE PLACE — 76 76 75
GOLDSBORO 27534 — 919 734-4736
U OF NC

MORRIS, JAMES FRANCIS — PD AC
P. O. BOX 1153 — 52 52 57
GOLDSBORO 27530 — 919 734-4014
U OF LOUISVILLE

NICKENS, LARRY COBB — PD AC
2706 MEDICAL OFFICE PLACE — 81 84 84
GOLDSBORO 27530 — 919 734-4736
U OF NC

PONZI, JOSEPH WILLIAM — PD AC
2706 MEDICAL OFFICE PLACE — 73 74 81
GOLDSBORO 27530 — 919 734-4736
DOWNSTATE ME CTR

TAYLOE, DAVID THOMAS, JR. — PD AC
2706 MEDICAL OFFICE PLACE — 74 76 77
GOLDSBORO 27534 — 919 734-4736
U OF NC

PUBLIC HEALTH

MAYS, OLIVER AIKEN — PH AC
408 TAYLOR PLACE — 45 45 70
GOLDSBORO 27530 — 919 731-1000
MED U OF SC

PATHOLOGY, ANATOMICAL AND CLINICAL

DANIELS, CHARLES A. — PTH AC
DEPT. OF PATHOLOGY — 66 70 87
PO BOX 8001
GOLDSBORO 27533 — 919 735-1530
VANDERBILT U

FULBRIGHT, DEBORAH KAY — PTH C
WAYNE MEMORIAL HOSPITAL — 79 79 8
PO BOX 8001
GOLDSBORO 27533 — 919 735-153
U OF ARKANSAS

KOKIKO, GEORGE VICTOR — PTH /CLP AC
WAYNE COUNTY HOSPITAL — 56 56 6
CALLER BOX 8001
GOLDSBORO 27530 — 919 735-153
BOWMAN GRAY

PULMONARY DISEASES

GUPTA, GOOL KAPADIA — PUD /IM AC
2704 MEDICAL OFFICE PLACE — 66 75 7
GOLDSBORO 27530 — 919 736-472
MAULANA AZAD

RADIOLOGY

CAMPBELL, ROBERT RICHARD — R AC
2700 MEDICAL OFFICE PLACE — 66 66 7
GOLDSBORO 27530 — 919 734-186
MED COLL OF VA

COMPTON, JOHN WALLACE — R L/RT
2700 MEDICAL OFFICE PLACE — 45 52 5
GOLDSBORO 27530 — 919 734-186
MED COLL OF VA

UROLOGICAL SURGERY

TURNER, WILLIAM BOMAR, III — U AC
2400 WAYNE MEM. DR. — 80 81 8
GOLDSBORO 27530 — 919 735-163
MED U OF SC

VARNEY, DAVID ALLEN — U /GS AC
2400 WAYNE MEMORIAL DR. — 68 69 7
GOLDSBORO 27530 — 919 778-654
GEORGETOWN U

97. WILKES COMPONENT SOCIETY

OFFICERS—**President:** Gregg Sigmon, M.D., 505 13th St., N. Wilkesboro 28659 (919 667-3922)
Secretary: Richard Geldmeier, M.D., Wilkes Gen. Hosp., West D. St., North Wilkesboro 28659 (919 651-8400)

NO SPECIALTY LISTED

SWOFFORD, JOEL HOWARD — AC
57 GREENFIELD LANE — 87 00 84
WILKESBORO 28659 — 919 838-5761
BOWMAN GRAY

ANESTHESIOLOGY

REID, CAROL DENISE R. — AN C
P.O. BOX 1076 — 81 82 91
WILKESBORO 28697 — 919 838-1144
UNIV. OF NC

VANZANT, GREG ALAN — AN AC
44 HOLLY TREE DR. — 84 84 88
WILKESBORO 28697 — 919 651-8372
U TX-SAN ANTONIO

DIAGNOSTIC RADIOLOGY

BENNETT, LAWRENCE NORTHWOOD — DR AC
PO BOX 609 — 82 82 00
N. WILKESBORO 28659 — 919 651-8400
U OF NC

FAMILY PRACTICE

BICKET, DAPHNE PATRICIA — FP C
RT. #1, BOX 312-A — 87 89 86
FERGUSON 28624 — 919 973-8682
BOWMAN GRAY

HAWKINS, HAL BURGESS — FP L/RT
11 GREEN WAY — 53 53 55
WILKESBORO 28697 — 919 838-5459
CASE WESTERN RES

KILBY, LARRY SHELTON — FP /GER AC
505 13TH ST. — 68 68 74
LOFLAND BLDG.
NORTH WILKESBORO 28659 — 919 667-3922
BOWMAN GRAY

LANDON, HENRY CLAYTON,III — FP /IM L/RT
PO DRAWER 1187 — 47 49 50
N. WILKESBORO 28659 — 919 838-5761
U OF VIRGINIA

GENERAL PRACTICE

HAYES, WILLIAM CLAYTON — GP RT
P. O. BOX 540 — 47 48 50
WILKESBORO 28697 — 919 838-5498
BOWMAN GRAY

GENERAL SURGERY

BAUGHAM, LEONARD ANDREW — GS AC
P. O. BOX 1146 — 75 76 84
NORTH WILKESBORO 28659 — 919 667-4718
MED COLL OF GA

BOND, JOHN LAWRENCE, JR. — GS /ORS AC
P. O. BOX 1128 — 54 60 60
N. WILKESBORO 28659 — 919 838-4789
U OF TENNESSEE

WATSON, JERRY FRANKLIN — GS AC
EIGHTH ST. — 60 60 73
PO BOX 789
N. WILKESBORO 28659 — 919 667-1183
U OF TENNESSEE

INTERNAL MEDICINE

BUNDY, WILLIAM LUMSDEN — IM /GP L/RT
PO BOX 786 — 36 36 40
N. WILKESBORO 28659 — 919 838-2550
VANDERBILT U

COMPEAU, PHILLIP E. C. — IM AC
1710 PARKWOOD DR., SOUTH SUITE — 71 72 78
WILKESBORO 28697 — 919 667-1285
HARVARD

97. WILKES COMPONENT SOCIETY (Continued)

MCMAHAN, THOMAS KEITH — IM /FP AC 70 70 74
PO BOX 976
1710 PARKWOOD DR.NORTH
WILKESBORO 28697 — 919 667-2634
WASHINGTON U

BSTETRICS AND GYNECOLOGY

SMITH, DUANE HOWARD — OBG AC 58 58 77
112 BOONE TRAIL
N. WILKESBORO 28697 — 919 667-8241
U OF CINCINNATI

STEVENS, CLARK WM., JR. — OBG AC 84 85 89
MEDICAL ARTS BLDG.
NORTH WILKESBORO 28659 — 919 667-4547
U OF VIRGINIA

WHICKER, CHARLES FINCH — OBG AC 51 58 59
BRUSHY MOUNTAIN OB-GYN ASSOC.
MEDICAL ARTS BLDG.
N. WILKESBORO 28659 — 919 667-1156
TEMPLE U

PHTHALMOLOGY

BOWMAN, ZEBULON LYNN — OPH /IM AC 77 79 84
110 CEDAR LANE
N. WILKESBORO 28659 — 919 838-9119
DUKE

OLIVER, JOHN GLADSON — OPH AC 75 76 81
408 EIGHTH STREET
NORTH WILKESBORO 28659 — 919 838-5121
U OF MIAMI

ORTHOPEDIC SURGERY

BENNETT, CRAIG RANDALL — ORS AC 81 84 81
408 8TH ST. DOCTOR'S BLDG.
PO BOX 788
NORTH WILKESBORO 28659 — 919 667-5039
U OF NC

PEDIATRICS

BRYAN, THOMAS RHUDY, JR. — PD /OBS AC 54 54 56
MEDICAL ARTS BUILDING
P. O. BOX 1163
NORTH WILKESBORO 28659 — 919 838-2500
BOWMAN GRAY

PUBLIC HEALTH

FULLER, CORODON S., JR. — PH /GP L/RT 49 50 56
RT. #1, BOX 61
MORAVIAN FALLS 28654 — 919 838-3334
LA STATE U

PATHOLOGY, ANATOMICAL AND CLINICAL

KIM, PHILLIP BOKSOO — PTH AC 57 71 89
WILKES GENERAL HOSPITAL
N. WILKESBORO 28659 — 919 651-8100
YONSEI U

RADIOLOGY

BENNETT, JOHN NORTHWOOD — R AC 47 51 53
ROUTE #1, BOX 96
MORAVIAN FALLS 28654 — 919 838-3896
MCGILL U

CARLSON, PHILIP RANDALL — R /IM AC 79 81 90
WILKES GENERAL HOSPITAL
DEPT. OF RADIOLOGY
N. WILKESBORO 28697 — 919 651-8400
MAYO MED SCHOOL

GELDMEIER, RICHARD WAYNE — R AC 84 85 91
WILKES GENERAL HOSPITAL
DEPT. OF RADIOLOGY
N. WILKESBORO 28659 — 919 651-8400
U OF TENNESSEE

98. WILSON COMPONENT SOCIETY

OFFICERS—**President:** Robert A. Satterly, M.D., 1700 S. Tarboro St., Wilson 27893 (919 399-2400)
Secretary: Jonathan G. DeWald, M.D., 1700 S. Tarboro St., Wilson 27893 (919 399-2200)

DMINISTRATIVE MEDICINE

NEWELL, JOSEPHINE E. — ADM /FP L/RT 49 49 51
RALEIGH TOWNE, APT. #47
525 WADE AVENUE
RALEIGH 27605 — 919 828-3480
U OF MARYLAND

NESTHESIOLOGY

BOHNSACK, MICHAEL ROBERT — AN AC 81 82 85
1803 WILDWOOD CT.
WILSON 27893 — 919 291-1700
M C OF WISCONSIN

BRINKMAN, DENNIS MICHAEL — AN AC 71 72 80
1203 GREENBRIAR COURT
WILSON 27893 — 919 291-1700
U OF MICHIGAN

CONNELL, GEORGE FREDERICK — AN AC 57 58 75
6905 OCEAN DR.
EMERALD ISLE 28594 — 919 291-1700
U OF TORONTO

ZEE, WENDELL J. — AN AC 85 85 90
2401-J WOOTEN BLVD.
WILSON ANESTHESIOLOGY
WILSON 27893 — 919 291-1700
U OF KANSAS

ARDIOVASCULAR DISEASES

LUND, JOHN JEFFERSON — CD /IM AC 57 64 65
1700 S. TARBORO ST.
WILSON 27893 — 919 399-2272
U OF VIRGINIA

WHITAKER, JAMES ALLEN, III — CD /IM AC 68 68 78
1700 S. TARBORO ST.
WILSON 27893 — 919 399-2218
U OF NC

ERMATOLOGY

COWAN, LEON KERR — D AC 54 54 81
WILSON DERM. CLINIC, PA
702 BROAD ST.
WILSON 27893 — 919 291-5600
U OF NC

GRAHAM, GLORIA FLIPPIN — D AC 61 61 67
702 BROAD STREET
WILSON 27893 — 919 291-5600
BOWMAN GRAY

POLLEY, DENNIS CHARLES — D AC 79 82 88
1901 S. TARBORO ST.
WILSON 27893 — 919 291-5600
DES MOINES OST

DIAGNOSTIC RADIOLOGY

GUAY, PAUL FERNAND — DR AC 78 81 89
3007 WOLF TRAP DR.
WILSON 27893 — 919 399-8112
NEW YORK MED COL

FAMILY PRACTICE

BOWEN, MICHAEL LYNN — FP AC 77 77 81
PO BOX 3185
WILSON 27895 — 919 237-2891
INDIANA U

BRNA, THEODORE GEORGE, JR. — FP /GER AC 83 86 90
BAILEY FAMILY PRACTICE CTR.
115 W. DEANS ST.
BAILEY 27807 — 919 235-4181
MED COLL OF VA

CUBBERLEY, CHARLES LAMB, JR. — FP L/RT 40 47 47
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STONE, ROBERT THOMAS OTO AC
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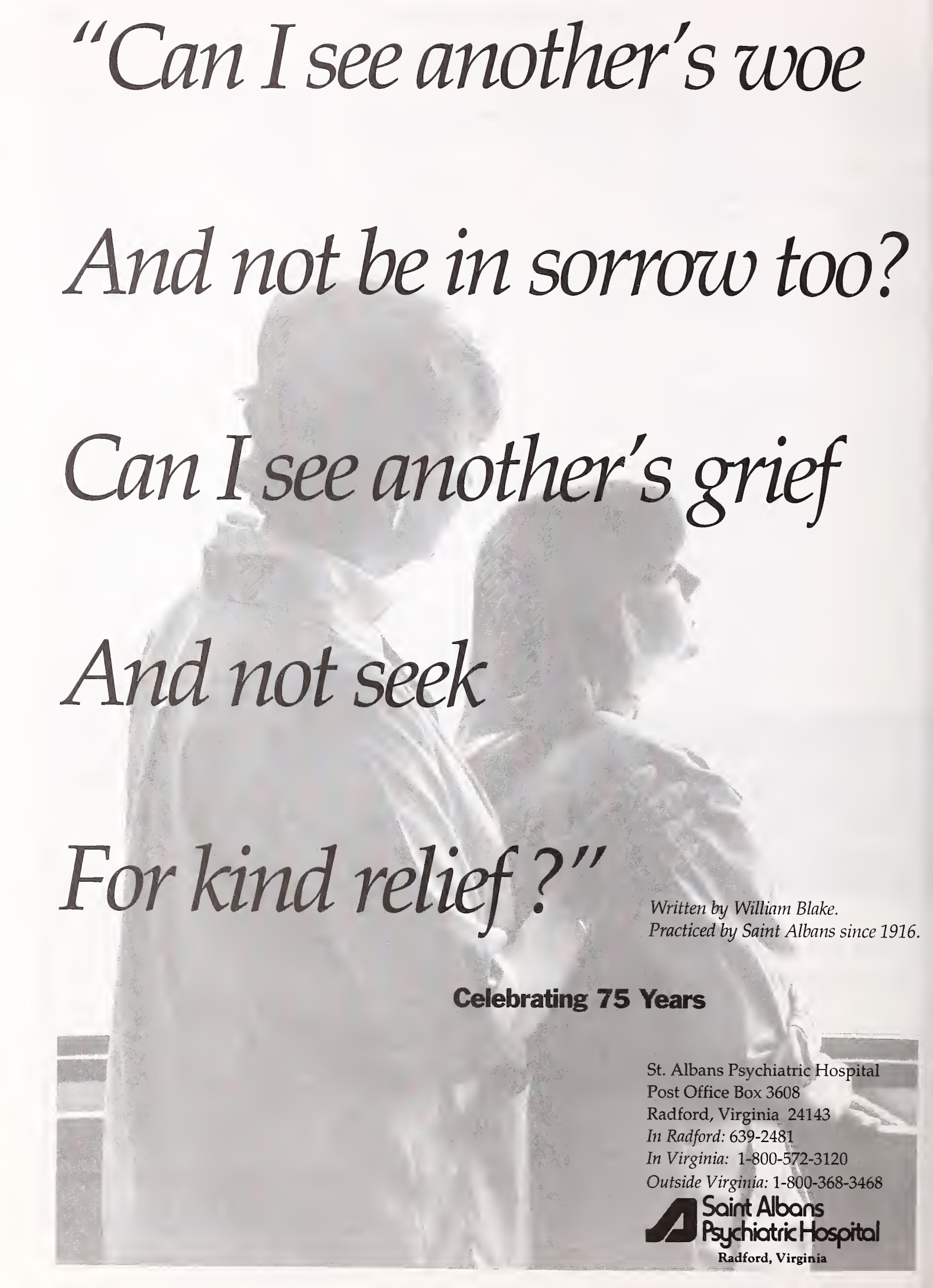
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Medical Specialty Societies and Other Health Care Organizations

1991 OFFICERS

North Carolina Society of Allergy and Clinical Immunology

President: John Klimas, M.D., 2711 Randolph Road, Charlotte 28207 (704) 372-7900
Vice President: John Georgitis, M.D., Bowman Gray School of Medicine, 300 S. Hawthorne Road, Winston-Salem 27103 (919) 748-2511
Secretary/Treasurer: Craig LaForce, M.D., 3801 Computer Dr., Suite 203, Raleigh 27609 (919) 787-5995
Officers Term: 2 years
Month Elected: November 1990
Membership: 45

North Carolina Society of Anesthesiology

President: Robert W. Vaughan, M.D., 101 Barnhill Place, Chapel Hill 27514 (919) 966-5136
President-Elect: Eric W. Mason, M.D., P.O. Box 18139, Raleigh 27619 (919) 783-3034
Secretary-Treasurer: Charles E. Frederick, M.D., 612 Waycross Drive, Greensboro 27410 (919) 299-6343
Executive Director: William N. Hillard, P.O. Box 6524, Raleigh 27628 (919) 787-5859
National Headquarters: American Society of Anesthesiologists, 515 Busse Highway, Park Ridge, IL 60068-3189 (708) 825-5586
Officers Term: January 1 to December 31
Month Elected: September
Membership: 500
Annual Meeting: September 13-15, 1991, Asheville, NC

North Carolina Membership, American College of Cardiology

Governor: Norris B. Harbold, M.D., 1001 Blythe Blvd., #300, Charlotte 28203 (704) 373-1503
National Headquarters Office: American College of Cardiology, 9111 Old Georgetown Road, Bethesda, MD 20814 (301) 897-5400
Officers Term: 2 years
Month Elected: November 1990
Annual Meeting: April, 1991, Atlanta, GA

North Carolina Council of Child Psychiatry

President: Roy Haberkern, M.D., Bowman Gray School of Medicine, 300 S. Hawthorne Road, Winston-Salem 27103 (919) 748-4220
President-Elect: David A. Smith, M.D., 800 D Franklin Square, Chapel Hill 27514
Secretary-Treasurer: Thomas Clay, M.D., 212 W. Rosemary Street, Chapel Hill 27516, (919) 933-2000
National Headquarters: American Academy of Child & Adolescent Psychiatry, 3615 Wisconsin Ave. N.W., Washington, DC 20016
Officers Term: 2 years
Month Elected: April
Annual Meeting: April, 1991, Durham, NC

North Carolina Dermatology Association

President: William M. Hendricks, M.D., 407 S. Cox Street, Asheboro 27203-5496 (919) 625-8140
President-Elect: Mendall Jordan, M.D., 2800 Blue Ridge Road, Suite 302, Raleigh 27607 (919) 781-1001
Secretary-Treasurer: James Patterson, M.D., 1638 Memorial Drive, Burlington 27215 (919) 226-8000
National Headquarters: American Academy of Dermatology, 820 Davis Street, Evanston, IL 60201
Officers Term: 1 year (Nov.-Nov.)
Annual Meeting: Asheville, NC

North Carolina Chapter, American Diabetes Association

Chairman: John Browning, 349 Whitehall Drive, Rocky Mount 27804 (919) 977-7505
President: Margie Rachide, M.D., 2600 Brookhaven Drive, Kinston 28501 (919) 522-4272
President-Elect: Jose Caro, M.D., 201 Kennelworth Road, Greenville 27858 (919) 757-2571
Executive Director: Thomas Walden, 2315-A Sunset Ave., Rocky Mount 27804 (800) 682-9692
National Headquarters: American Diabetes Association, 1660 Duke St., Alexandria, Virginia 22314 (703) 549-1500
Officers Term: 1 year
Month Elected: May
Membership: 4,200

North Carolina Chapter, American College of Emergency Physicians

President: Jeffrey Runge, M.D., Charlotte Memorial Hospital, P.O. Box 32861, Charlotte 28232 (704) 331-3181
President-Elect: Nicholas Benson, M.D., 1309 Fantasia Street, Greenville 27858 (919) 551-4297
Secretary-Treasurer: Kathleen Cline, M.D., ECU Department of Emergency Medicine, Physicians Quadrangle, Building M, Greenville 27858 (919) 551-4757
Executive Director: Mary Alice Dilday, 4101 Lake Boone Trail, Suite 201, Raleigh 27607 (919) 787-5181
National Headquarters: American College of Emergency Physicians, 1125 Executive Circle, Irving, TX 75038 (800) 798-1822
Officers Term: 1 year (Oct.-Oct.)
Month Elected: October
Membership: 343
Annual Meeting: May 30-June 1, 1991, Shell Island Resort, Wrightsville Beach, NC

North Carolina Academy of Family Physicians

President: C. Christopher Bremer, East Carolina University, Dept. of Family Practice, Brody 4N78, Greenville 27858-4354, (919) 551-2601
President-Elect: Thomas L. Speros, M.D., 501 West 15th Street, Washington 27889 (919) 975-2667
Vice-President: Johnny W. Bagwell, M.D., 1005 Vandora Springs Road, Garner 27529 (919) 779-1440
Secretary-Treasurer: Edward J. Shahady, M.D., UNC Dept. of Family Medicine, CB# 7595, Gravely Building, Chapel Hill 27599-7595 (919) 966-3714
Executive Vice-President: Sue Makey, P.O. Box 18469, Raleigh 27609 (919) 781-6467
National Headquarters: American Academy of Family Physicians, P.O. Box 8723, Kansas City, MO 64114-0723 (800) 821-2510
Officers Term: 1 year, 3 years for Secretary-Treasurer
Month Elected: March
Membership: 1800
Annual Meeting: March 20-24, 1991, Sheraton Imperial, Research Triangle Park

North Carolina Society of Internal Medicine

President: Robert W. Carter, M.D., Kernodle Clinic, Graham-Hopedale Road, Burlington 27217, (919) 227-3621
President-elect: E. Rodney Hornbake, M.D., Farm Life Avenue, Vanceboro 28586 (919) 244-1785
Vice-President: James C. Gaither, M.D., Route 2, Box 199, Conover 28613 (704) 322-1128
Secretary-Treasurer: Byron J. Hoffman, Jr., M.D., 421 N. Holly St., Siler City 27344 (919) 633-3360
Executive-Director: William N. Hilliard, P.O. Box 6524, Raleigh 27628 (919) 787-5859
National Headquarters: American Society of Internal Medicine, 1101 Vermont Avenue, NW, Suite 500, Washington, DC 20005 (202) 389-1700
Officers Term: 1 year (May-May)
Month Elected: May
Membership: 650
Annual Meeting: June 1991, Wrightsville Beach

North Carolina Neurosurgical Society

President: James S. Fulgham, M.D., 3009 New Bern Ave., P.O. Box 14027, Raleigh 27610 (919) 832-4448
Secretary-Treasurer: F. Douglas Jones, M.D., 125 Moye Blvd., Greenville 27834 (919) 752-5156

North Carolina Obstetrical and Gynecological Society

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President-Elect: Robert C. Cefalo, M.D., UNC, Department of OB-GYN, Division of Maternal & Fetal Medicine, CB#7570, 214 MacNider Building, Chapel Hill 27599-7570 (919) 966-1601
Secretary-Treasurer: William N. P. Herbert, M.D., UNC School of Medicine, Department of OB-GYN, CB#7570, Chapel Hill 27599-7570 (919) 966-1601
Immediate Past President: James H. M. Thorp, M.D., 200 Nash Medical Arts Mall, Rocky Mount 27801 (919) 443-5941
Executive Director: Carol T. Russell, P.O. Box 27167, Raleigh 27611 (919) 833-3836
National Headquarters: American College of Obstetrics and Gynecology, 600 Maryland Ave., #300, East, Washington, DC 20024 (202) 638-5577
Officers Term: 1 year, 3 years for Secretary-Treasurer
Month Elected: April
Membership: 393
Annual Meeting: April 19-21, 1991, Pinehurst Hotel

North Carolina Society of Ophthalmology

President: Thomas L. Beardsley, M.D., 495 Biltmore Ave., Asheville 28801 (704) 253-9821
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Executive Director: Carol T. Russell, P.O. Box 27167, Raleigh 27611 (919) 833-3836
National Headquarters: American Academy of Ophthalmology, P.O. Box 7424, San Francisco, CA 94120-7424 (415) 921-4700
Officers Term: 1 year
Month Elected: April
Membership: 276
Annual Meeting: April 4-6, 1991, Omni, Charleston, SC

North Carolina Orthopaedic Association

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Secretary-Treasurer: David A. Rockwell, M.D., 2701 Medical Office Place, Goldsboro 27530 (919) 736-2157
Executive Director: Carol T. Russell, P.O. Box 27167, Raleigh 27611 (919) 833-3836
National Headquarters: American Academy of Orthopaedic Surgeons, 222 South Prospect Avenue, Park Ridge, IL 60068 (312) 823-7186
Officers Term: 1 year, 3 years for Secretary-Treasurer
Month Elected: October
Membership: 283
Annual Meeting: September 19-21, 1991, Blockade Runner, Wrightsville Beach, NC

North Carolina Society of Otolaryngology & Maxillofacial Surgery

President: Samuel R. Fisher, M.D., Duke University Medical Center, Box 3805, Durham, NC 27710, (919) 684-4201
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Secretary-Treasurer: W. Frederick McGuirt, M.D., Bowman Gray School of Medicine, 300 S. Hawthorne Road, Winston-Salem 27103 (919) 748-4161
Officers Term: 1 year
Month Elected: Late summer or early fall
Membership: 165
Annual Meeting: August 15-18, 1991, Myrtle Beach, SC

North Carolina Society of Pathologists

President: D. Carl Biggers, M.D., Department of Pathology, Memorial Mission Hospital, Asheville 28801 (704) 255-4270
President-Elect: Jared N. Schwartz, M.D., P.O. Box 33549, Charlotte 28233 (704) 371-4814
Vice President: John D. Shelburne, M.D., DUMC, Box 3712, Durham 27710 (919) 286-6925
Secretary-Treasurer: D. Emerson Scarborough, M.D., Dept. of Pathology, Wake Medical Center, Raleigh 27610 (919) 755-8260
National Headquarters: American Society of Clinical Pathologists, 1101 Vermont Ave., N.W., Ste. 604, Washington, DC 20005-3546 (202) 371-6617
Officers Term: 1 year
Month Elected: November
Membership: 206
Annual Meeting: November 1991, Asheville, NC

North Carolina Pediatric Society

President: E. Stephen Edwards, M.D., 2800 Blue Ridge Road, Suite 501, Raleigh 27607 (919) 781-7490
Vice-President: David T. Tayloe, Jr., M.D., 2706 Medical Office Place, Goldsboro 27530 (919) 734-5294
Secretary: Olson Huff, M.D., Thoms Rehabilitation Hospital, One Rotary Drive, P.O. Drawer 15025, Asheville 28813 (704) 251-6091
Treasurer: K. Michael Dennis, M.D., 418 King Street, Laurinburg 28352 (919) 276-7570
Executive Director: Carol T. Russell, P.O. Box 27167, Raleigh 27611 (919) 833-3836
National Headquarters: American Academy of Pediatrics, 141 Northwest Point Blvd., P.O. Box 927, Elk Grove Village, IL 60009 (800) 433-9016
Officers Term: 3 years
Month Elected: September
Membership: 996
Annual Meeting: September 5-8, 1991, Grove Park Inn, Asheville, NC

North Carolina Society of Plastic and Reconstructive Surgery

President: William Mullis, M.D., 2215 Randolph Road, Charlotte 28207 (704) 372-6846
President-Elect: William A. Lambeth, M.D., 1112 Dresser Court, Raleigh 27609 (919) 872-2771
Secretary: J. Robert Israel, MD, 5 Livingstone Road, Asheville 28801 (704) 253-7000
Treasurer: John Briggs, M.D., 1774 Metromedical Drive, Fayetteville 28304 (919) 323-1203
National Headquarters: American Society of Plastic and Reconstructive Surgeons, 444 East Algonquin Road, Arlington Heights, IL 60005
Officers Term: 1 year; secretary & treasurer 3 years
Month Elected: November
Membership: 65
Annual Meeting: November 1991

North Carolina Chapter, American College of Physicians

President: Elizabeth Gamble, M.D., 607 Winstead Road, Greenville 27834 (919) 756-7901
Vice-President: Phillip A. Sellers, M.D., 510 7th Avenue, West Hendersonville 28739 (704) 692-2231
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Executive Director: William N. Hilliard, P.O. Box 6524, Raleigh 27628 (919) 787-5859
National Headquarters: American College of Physicians, 4200 Pine Street, Philadelphia, PA 19104 (215) 243-1500

Officers Term: 1 year, 3 years for Governor
Month Elected: February
Membership: 1406
Annual Meeting: February 22-24, 1991

North Carolina Psychiatric Association

President: Margaret J. Dorfman, M.D., 402 Ray Road, Chapel Hill 27514 (919) 490-6477
President-Elect: Donna E. Frick, M.D., 109 Conner Drive, #203 Bldg. 3, Chapel Hill 27514 (919) 933-5600
Vice-President: Leslie T. Mega, M.D., Department of Psychiatric Medicine, ECU School of Medicine, Greenville 27858 (919) 551-2673
Secretary: Eric W. Peterson, M.D., 5 Crowningway Drive, Asheville 28804 (704) 254-3201
Treasurer: Edward J. Rhoads, M.D., 616 Walter Reed Drive, Greensboro 27403 (919) 299-0511
Executive Director: Katherine P. Hux, 4917 Waters Edge Drive, Suite 250, Raleigh 27606 (919) 859-3370
National Headquarters: American Psychiatric Association, 1400 K. Street, NW, Washington, DC 20005 (202) 682-6000
Officers Term: 1 year, 2 years for Secretary-Treasurer
Month Elected: May
Membership: 796
Annual Meeting: October 17-21, 1991, Atlanta Beach, NC

North Carolina Chapter, American College of Radiology

President: William T. Thorwarth, Jr., M.D., P.O. Box 308, Hickory 28603 (704) 322-2871
President-Elect: Daniel C. Sullivan, M.D., DUMC, Box 3808, Durham 27710 (919) 684-2711
Vice-President: Arl Van Moore, M.D., 3030 Latrobe Drive, Charlotte 28211 (704) 365-0343
Secretary-Treasurer: Thomas H. Hunt, M.D., Forsyth Radiological Assoc. Inc., 3155 Maplewood Avenue, Winston-Salem 27103 (919) 760-5874
National Headquarters: American College of Radiology, 1891 Preston White Drive, Reston, VA 22091 (703) 648-8900
Officers Term: 1 year
Month Elected: Spring Meeting — April
Membership: 400
Annual Meeting: April 26-28, 1991

North Carolina Chapter, American College of Surgeons

President: Michael C. Rowland, M.D., One Memorial Drive, Pinehurst Surgical Clinic, Pinehurst 28374 (919) 295-2232
President-Elect: Richard W. Furman, M.D., 702 State Farm Road, Boone 28607 (704) 264-2340
Vice-President: John O. McGuire, M.D., 16 McDowell Street, Asheville 28801 (704) 252-3366
Secretary-Treasurer: W. Frederick McGuirt, M.D., Bowman Gray School of Medicine, 300 S. Hawthorne Rd., Winston-Salem 27103 (919) 748-4161
Executive Director: Carol T. Russell, P.O. Box 27167, Raleigh 27611 (919) 833-3836
National Headquarters: American College of Surgeons, 55 East Erie Street, Chicago, IL 60611 (312) 664-4050
Officers Term: 1 years, 3 years for Secretary-Treasurer
Month Elected: July
Membership: 595
Annual Meeting: July 11-14, 1991, Grove Park Inn, Asheville, NC

North Carolina Surgical Association

President: W. Chandler Thompson, Jr., M.D., 3535 Randolph Road, 201 Wendover Building, Charlotte 28211 (704) 364-8100
President-Elect: Peter Young, M.D., 1317 N. Elm Street, Ste. 5, Greensboro 27401 (919) 274-8444
Vice-President: Henry V. P. Wilson, M.D., 3535 Randolph Rd., 201-W, Charlotte 28211 (704) 364-8100
Secretary-Treasurer: Frank Sabiston, Jr., M.D., P.O. Box 1316, Kinston 28501 (919) 522-1626
Officers Term: 1 year
Month Elected: April
Membership: 168
Annual Meeting: April 25-28, 1991, Mid Pines Resort, Southern Pines, NC

North Carolina Thoracic Society

President: Albert G. Driver, Jr., M.D., ECU School of Medicine, Brody Bldg., Room 340, Greenville 27858 (919) 757-4653
President-Elect: David Collins, M.D., 3001 Lyndhurst Avenue, Winston-Salem 27103 (919) 765-0888
Secretary-Treasurer: James Yankaskas, M.D., UNC, Div. of Pulmonary Diseases, CB#7020, Chapel Hill 27599
Administrative Assistant: Scott Venable, P.O. Box 27985, Raleigh 27611 (919) 832-8326
National Headquarters: American Thoracic Society, 1740 Broadway, New York, NY 10019
Officers Term: 1 year
Month Elected: April
Membership: 150
Annual Meeting: April 6, 1991, Winston-Salem, NC

North Carolina Urological Association

President: Louis Marchetti, M.D., MidSouth Urology Ctr., PA, Box 3, Two Memorial Drive, Pinehurst 28374 (919) 295-6782
President-Elect: Raymond J. Fencl, M.D., 180-0 Parkwood Drive, Elkin 28621 (919) 526-2000
Secretary-Treasurer: R. Dale Ensor, M.D., 1333 Romany Road, Charlotte 28204 (704) 372-5180
Executive Director: Carol T. Russell, P.O. Box 27167, Raleigh 27611 (919) 833-3836
Officers Term: 1 year
Month Elected: November
Membership: 100
Annual Meeting: November 1991, Grove Park Inn, Asheville, NC

Old North State Medical Society

President: Fred D. McQueen, Jr., M.D., P.O. Drawer 1257, Hamlet, NC 28345 (919) 582-4004
President-Elect: James R. O'Rourke, Jr., M.D., 3012 Falstaff Road, Raleigh 27610 (919) 231-2220
Vice-President: Dwight D. Perry, M.D., 512 Simmons Street, Durham 27701 (919) 682-7175
Secretary: Eric Buffong, M.D., 1703 Country Club Rd., Ste. 203A, Jacksonville 28540 (919) 346-2182
Treasurer & Convention Chairman: John T. Daniel, Jr., M.D., 415 Dunstan St., Durham 27707 (919) 682-7378
National Headquarters: National Medical Association, 1012 Tenth Street, N.W., Washington, DC 20001 (202) 347-1895
Officers Term: 2 years
Month Elected: June
Membership: 120

North Carolina Nurses Association

President: Gale Johnston, 4305 Sunbelt Dr., Raleigh 27613 (919) 781-7077
President-Elect: Sheila Cromer, Route 4, Box 362, Thomasville 27360 (919) 884-7636
Vice-President: Wanda Boyette, Rt. 6, Box 552, Clinton 28328 (919) 592-8511, ext. 401
Secretary: Eugene Tranbarger, 4805 W. Friendly Ave., Greensboro 27410 (919) 334-5010
Treasurer: Patti Fralix, Rex Hospital, 4420 Lake Boone Trail, Raleigh 27607 (919) 783-3149
Executive Director: Hazel Browning Moore, P.O. Box 12025, Raleigh 27605 (919) 821-4250
National Headquarters: American Nurses Assoc., 2420 Pershing Rd., Kansas City, MO 64108 (816) 474-5720
Officers Term: 2 years
Month Elected: October
Membership: 3,486
Annual Meeting: October 23-26, 1991, Charlotte, NC

North Carolina Society of Physicians Assistants

President: Bud Shelton, PAC, Route 1, Box 249C, Efland 27243 (919) 684-6726
President-Elect: Paul Hendrix, PAC, 708 Duluth Street, Durham 27705 (919) 684-6101
Vice President: Donna Smyth, PAC, 3932 New Garden Park, Greensboro 27410 (919) 373-8245
Secretary: Suzanne Reich, PAC, 2827 Windy Crossing, Winston-Salem 27127 (919) 748-4469

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Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatric. It may have activity as an aphrodisiac.

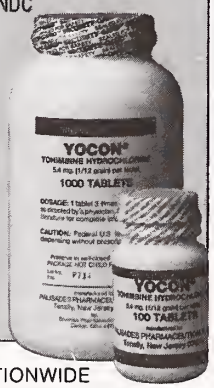
Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.



References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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Health & Effectiveness Coordinator: Gail Curtis, PAC, Bowman Gray Dept. of Family Medicine, 300 S. Hawthorne Road, Winston-Salem 27103 (919) 748-2246
National Headquarters: American Academy of Physicians' Assistants, 950 N. Washington Street, Alexandria, VA 22314-1534 (703) 836-2272
Officers Term: January 1-December 31
Months Elected: September
Membership: 470+
Annual Meeting: August 17, 1991, Wrightsville Beach, NC

North Carolina Health Care Facilities Association

Executive Director: Craig Souza, 5109 Bur Oak Circle, Raleigh 27612 (919) 782-3827

North Carolina Medical Group Managers

President: Cameron Cox, Jr., ECU School of Medicine, P.O. Box 8168, Greenville 27834 (919) 551-2322
President-Elect: Karen Randolph, Union Orthopaedics, PA, 701 Roosevelt Blvd., Ste. 600, Monroe 28110 (704) 289-4595
Vice-President: Kevin Bilson, Kernodle Clinic, Inc., 316 N. Graham-Hopedale Road, Burlington 27217-2999 (919) 227-3621
Secretary: J. Ben Hinson, Nalle Clinic, 1350 S. Kings Drive, Charlotte 28207 (704) 372-8750
Treasurer: Rick D. Deese, Medical Faculty Practice Plan, P.O. Box 168, Chapel Hill 27514 (919) 966-1591
National Headquarters: MGMA, 104 Inverness Terrace East, Denver, CO 80112-5306 (303) 799-1111
Officers Term: 1 year
Month Elected: November
Membership: 374
Annual Meeting: Sept. 12-14, 1991, Omni Hotel, Charlotte, NC

North Carolina Hospital Association

President: C. Edward McCauley NC Hospital Association, P.O. Box 80428, Raleigh 27623-0428 (919) 677-2400
Chairman: Eric B. Munson, Executive Director, University of North Carolina Hospitals, Manning Drive, Chapel Hill 27514 (919) 966-4131
Chairman-Elect: Robert H. Luse, President, Valdese General Hospital, P.O. Box 700, Valdese 28690 (704) 874-2251
Past Chairman: Paul M. Wiles, President, Forsyth Memorial Hospital, 3333 Silas Creek Parkway, Winston-Salem 27103, (919) 760-5000
Secretary: Les A. Donahue, President, The McDowell Hospital, P.O. Box 730, Marion 28752 (704) 652-2125
Treasurer: Richard L. Myers, President, Durham County General Hospital, 3643 N. Roxboro Street, Durham 27704 (919) 470-4000
Officers Term: January 1 to December 31
Month Elected: November
Membership: 145
Annual Meeting: July 17-19, 1991, Hilton Head, SC

North Carolina Society of Medical Assistants

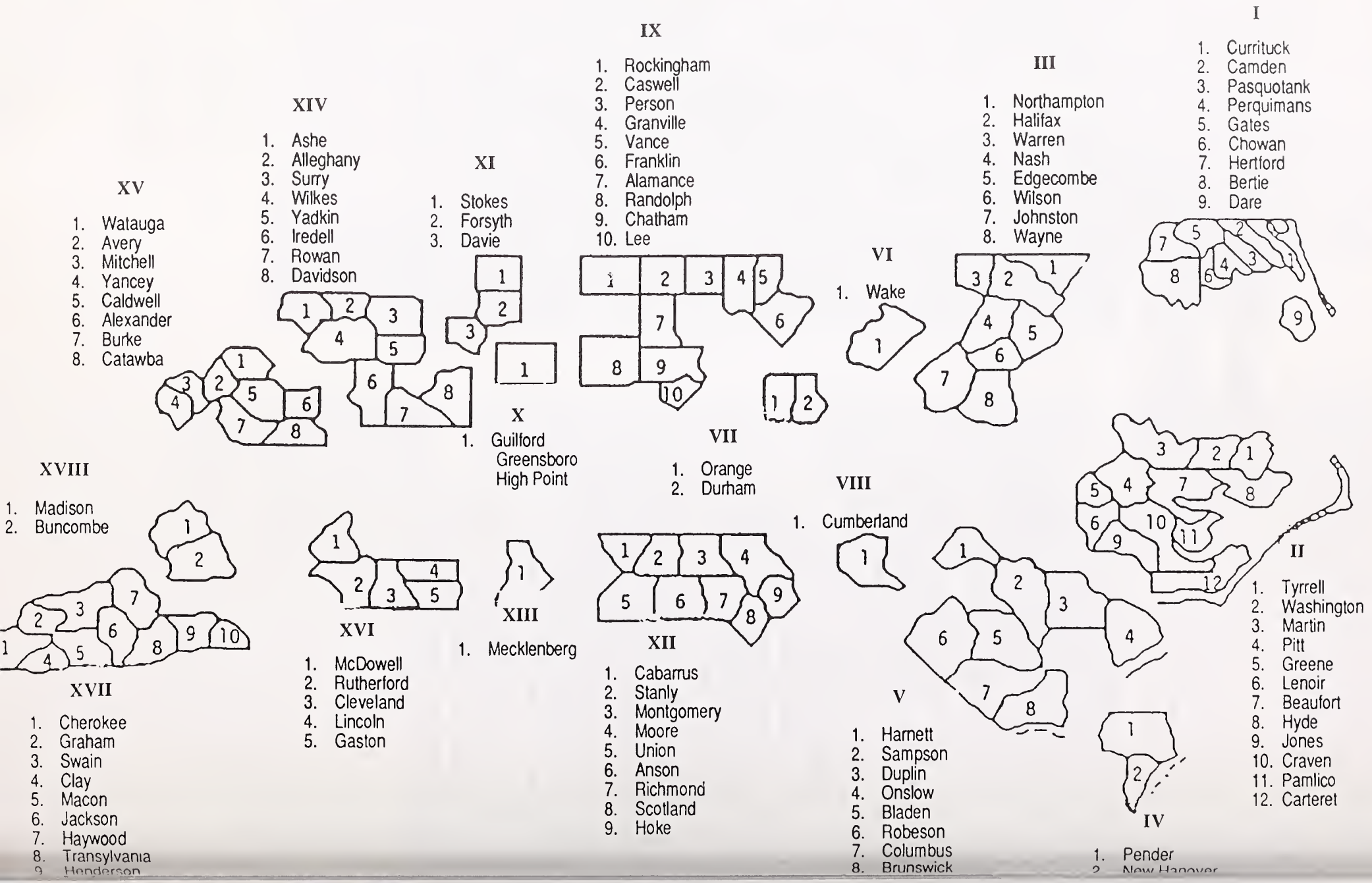
President: Nancy Peedin, CMA, 4350 US #220 North, Summerfield 27358 (919) 373-1383
President-Elect: Jackie Albritton, CMA, Route 1, Box 276, Hookerton 28538 (919) 527-4146
1st Vice President: Marilyn Riggs, CMA, 2400 Carey Road, Kinston 28501 (919) 523-7082
2nd Vice President: Diane Carriker, Route 1, Box 357A, Harrisburg 28075 (919) 782-3135
Recording Secretary: Frankie Parsons, 314 Glenn Court, Mt. Airy 27030 (919) 786-5108
Treasurer: Jean Dale, CMA, P.O. Box 1053, Glen Alpine 28628 (704) 433-4661
Officers Term: 1 year, Secretary and Treasurer 2 years
Month Elected: May
Annual Meeting: May 17-19, 1991, Greensboro, NC

IN MEMORIAM

Deaths reported to the NCMS office as of February 10, 1991

Anderson, Elbert Carl, Wilmington — 11-26-89
Bacon, Harold Lyle, Bryson City — 4-90
Barham, Berlin Francis, Jr., Charlotte — 7-23-90
Battle, Newsom Pittman, Rocky Mount — 1-13-90
Blake, Damon Dalton, Winston-Salem — 8-21-90
Bond, Vernard Franklin, Jr., Bermuda Run — 3-15-90
Brown, Charles William, Charlotte — 11-22-90
Brown, Kermit English, Asheville — 2-28-90
Buie, Roderick Mark, Jr., Greensboro — 6-26-90
Caldwell, Lawrence McClure, Sr., Newton — 3-6-90
Clark, Charles Brian, Winston-Salem — 7-4-90
Cloninger, Charles E., Conover — 11-18-90
Cole, Warren Henry, Asheville — 5-25-90
Covington, John M.C., Roanoke Rapids — 8-7-90
Crouch, Walter Lee, Wilmington — 9-7-90
DeMaria, William John, Raleigh — 9-10-90
Ewers, Edwin Patterson, Warsaw — 1-10-90
Feldman, Walter Sidney, Charlotte — 1-31-90
Fitzpatrick, John Francis, Asheboro — 12-21-90
Fowler, Henry Jackson, Walnut Cove — 8-1-90
Garrard, Robert Lemley, Greensboro — 12-26-89
Garrison, Robert Lee, Charlotte — 7-14-90
Givens, George Howard, Jr., Taylorsville — 3-27-90
Greene, Robert Hadley, Charlotte — 11-23-90
Heath, Hunter, Chapel Hill — 12-23-89
Hooks, Richard Eugene, St. Pauls — 6-28-90
Horne, Stephen Francis, Rocky Mount — 8-29-90
Inman, Charles Ernest, Fairmont — 10-14-90
Johnston, Frank Randolph, Winston-Salam — 12-12-90
Jones, Joseph Reid, Jr., King — 2-2-90
Jones, Norman N., Greensboro — 2-1-91
Joyner, George William, Asheboro — 3-1-90
Koury, Marvella Vanney, Burlington — 11-24-89
Leiby, George Martin, Albuquerque, NM — 9-5-90
Lerner, Paul, Asheville — 8-4-90
Lovelace, Thomas Claude, Henrietta — 9-28-90
Lovell, William Figgatt, Charlotte — 10-8-90
Mahaffee, Walter Collins, Greensboro — 8-23-90
McGee, Julian Murrill, Greensboro — 10-15-90
McLeod, William Louis, Oakboro — 3-23-90
Melton, Robert Allen, Wilmington — 6-8-90
Miller, Horace William, Fayetteville — 11-20-90
Miller, Milton Leonard, Gibson — 8-29-90
Naga, Ahmed Hady, Kenansville — 3-14-90
Nagy, Brian Robson, Charlotte — 9-5-90
Nance, Frederick Lee, Jr., Chapel Hill — 3-14-90
Norburn, Charles S., Knoxville, TN — 8-10-90
O'Neal, Ruth, Winston-Salem — 5-11-90
Prather, Fonzo Goff, Asheville — 10-19-90
Pressly, David Lowry, Statesville — 2-4-90
Randolph, Angus Crawford, Winston-Salem — 1-31-90
Riggs, Millard McAdoo, Morganton — 11-15-90
Rodman, Clark, Washington — 12-10-90
Royster, Chauncey Lake, Raleigh — 2-15-90
Sinclair, Louis Gordon, Raleigh — 1-11-91
Smith, Russell Lee, Winston-Salem — 4-1-90
Sternbergh, W. C. A., Signal Mt., TN — 4-17-90
Stevens, Joseph Blackburn, Greensboro — 7-11-90
Stewart, John Reagan, Sr., Statesville — 9-8-90
Taylor, Everette Lester, Jr., Sparta — 9-18-89
Taylor, William Ivey, Jr., Burgaw — 1-20-90
Thorne, Silas Owens, Jr., Morehead City — 10-21-90
Trachtenberg, William, Goldsboro — 11-12-90
Tyson, Woodrow Wilson, High Point — 7-2-90
Vance, Shelby William, Pineola — 2-13-90
Vaughn, Robert Dee, Jr., Charlotte — 7-9-90
Wearn, Franklin S., II, Statesville — 12-5-90
Welfare, Charles Randall, Winston-Salem — 6-2-90
Whaley, James Davant, Camden, SC — 6-4-90
Wharton, Charles Watson, Smithfield — 9-6-90
Wilkerson, Earl Randolph, Jr., Charlotte — 5-11-90
Wolfe, Alfred Louis, III, Morehead City — 11-5-90
Wynn, Lawrence N., Williamston — 8-29-90
Wright, John Everett, Fuquay-Varina — 9-17-90

District Map (18 Districts)



XV
1. Watauga
2. Avery
3. Mitchell
4. Yancey
5. Caldwell
6. Alexander
7. Burke
8. Catawba

XIV
1. Ashe
2. Alleghany
3. Surry
4. Wilkes
5. Yadkin
6. Iredell
7. Rowan
8. Davidson

XI
1. Stokes
2. Forsyth
3. Davie

IX
1. Rockingham
2. Caswell
3. Person
4. Granville
5. Vance
6. Franklin
7. Alamance
8. Randolph
9. Chatham
10. Lee

III
1. Northampton
2. Halifax
3. Warren
4. Nash
5. Edgecombe
6. Wilson
7. Johnston
8. Wayne

I
1. Currituck
2. Camden
3. Pasquotank
4. Perquimans
5. Gates
6. Chowan
7. Hertford
8. Bertie
9. Dare

VI
1. Wake

X
1. Guilford
Greensboro
High Point

VII
1. Orange
2. Durham

XVIII
1. Madison
2. Buncombe

XVII
1. Cherokee
2. Graham
3. Swain
4. Clay
5. Macon
6. Jackson
7. Haywood
8. Transylvania
9. Henderson

XVI
1. McDowell
2. Rutherford
3. Cleveland
4. Lincoln
5. Gaston

XIII
1. Mecklenberg

XII
1. Cabarrus
2. Stanly
3. Montgomery
4. Moore
5. Union
6. Anson
7. Richmond
8. Scotland
9. Hoke

VIII
1. Cumberland

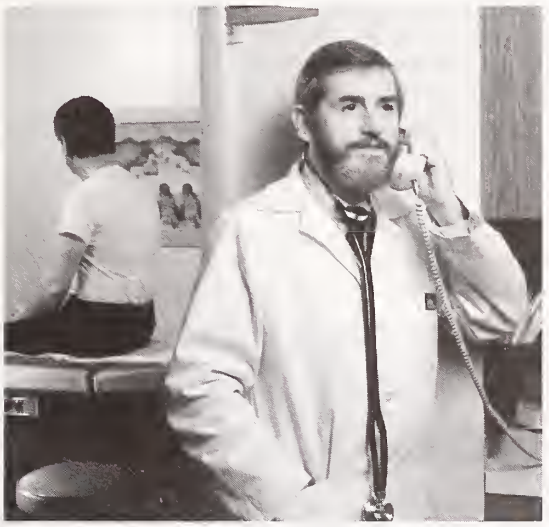
V
1. Harnett
2. Sampson
3. Duplin
4. Onslow
5. Bladen
6. Robeson
7. Columbus
8. Brunswick

II
1. Tyrrell
2. Washington
3. Martin
4. Pitt
5. Greene
6. Lenoir
7. Beaufort
8. Hyde
9. Jones
10. Craven
11. Pamlico
12. Carteret

IV
1. Pender
2. New Hanover

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Pediatric Infectious Diseases
Pediatric Nephrology
Pediatric Neurology
Pediatric Pulmonary Diseases
Pediatric Rheumatology and Immunology
Pediatric Surgery
Plastic Surgery
Psychiatry
Pulmonary Diseases
Radiology
Radiation Oncology
Rheumatology
Surgery
Thoracic Surgery
Trauma Surgery
Urology
Vascular Surgery

Carolina Consultation Center University of North Carolina Hospitals

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Date—Name, Address

1849—*Frederick J. Hill, Wilmington (Brunswick)
1850—*Edward Strudwick, Hillsborough (Orange)
1851—*Edward Strudwick, Hillsborough (Orange)
1852—*James E. Williamson, Yanceyville (Caswell)
1853—*James E. Williamson, Yanceyville (Caswell)
1854—*J. H. Dickson, Wilmington (New Hanover)

1855—*J.H. Dickson, Wilmington (New Hanover)
1856—*Charles E. Johnson, Raleigh (Wake)
1857—*Charles E. Johnson, Raleigh (Wake)
1858—*William H. McKee, Raleigh (Wake)
1859—*William H. McKee, Raleigh (Wake)

1860—*Newsom J. Pittman, Tarborough (Edgecombe)
1861—*Newsom J. Pittman, Tarborough (Edgecombe)
1866—*J. J. Summerell, Salisbury (Rowan)
1867—*W. G. Thomas, Tarborough (Edgecombe)
1868—*S. S. Satchwell, Rocky Point (Pender)
1869—*E. Burke Haywood, Raleigh (Wake)

1870—*Charles J. O'Hagan, Greenville (Pitt)
1871—*Hugh Kelley, Statesville (Iredell)
1872—*W. G. Hill, Raleigh (Wake)
1873—*M. Whitehead, Salisbury (Rowan)
1874—*W. A. B. Norcom, Edenton (Chowan)

1875—*J. W. Jones, Tarborough (Edgecombe)
1876—*Peter E. Hines, Raleigh (Wake)
1877—*George A. Foote, Warrenton (Warren)
1878—*R. L. Payne, Lexington (Davidson)
1879—*Charles Duffy, Jr., New Bern (Craven)

1880—*J. F. Shaffner, Salem (Forsyth)
1881—*Richard Benehan Haywood, Raleigh (Wake)
1882—*Thomas F. Wood, Wilmington (New Hanover)
1883—*J. K. Hall, Greensboro (Guilford)
1884—*A. B. Pierce, Halifax (Halifax)

1885—*W. C. McDuffie, Fayetteville (Cumberland)
1886—*Joseph Graham, Charlotte (Mecklenburg)
1887—*H. T. Bahnson, Salem (Forsyth)
1888—*T. D. Haigh, Fayetteville (Cumberland)
1889—*W. T. Ennett, Rocky Point (Pender)

1890—*G. G. Thomas, Wilmington (New Hanover)
1891—*R. L. Lewis, Raleigh (Wake)
1892—*W. T. Cheatham, Henderson (Vance)
1893—*J. W. McNeil, Fayetteville (Cumberland)
1894—*W. H. H. Cobb, Goldsboro (Wayne)

1895—*J. H. Tucker, Henderson (Vance)
1896—*R. L. Payne, Lexington (Davidson)
1897—*P. L. Murphy, Morganton (Burke)
1898—*Francis Duffy, New Bern (Craven)
1899—*L. J. Picot, Raleigh (Wake)

1900—*George W. Long, Graham (Alamance)
1901—*Julian M. Baker, Tarborough (Edgecombe)
1902—*Robert S. Young, Concord (Cabarrus)
1903—*A. W. Knox, Raleigh (Wake)
1904—*Henry A. Weaver, Asheville (Buncombe)

1905—*David T. Tayloe, Washington (Beaufort)
1906—*Edward C. Register, Charlotte (Mecklenburg)
1907—*Samuel D. Booth, Oxford (Granville)
1908—*J. Howell Way, Waynesville (Haywood)
1909—*J. F. Highsmith, Fayetteville (Cumberland)

1910—*J. A. Murroughs, Asheville (Buncombe)
*E. J. Wood, Wilmington (New Hanover)
1911—*C. M. Van Poole, Salisbury (Rowan)
1912—*A. A. Kent, Lenoir (Caldwell)
1913—*J. P. Munroe, Charlotte (Mecklenburg)
1914—*J. M. Parrott, Kinston (Lenoir)

1915—*L. B. McBrayer, Sanatorium (Hoke)
1916—*M. H. Fletcher, Asheville (Buncombe)
1917—*Charles O'H. Laughinghouse, Greenville (Pitt)
1918—*I. W. Faison, Charlotte (Mecklenburg)
1919—*Cyrus Thompson, Jacksonville (Onslow)

1920—*Carl V. Reynolds, Asheville (Buncombe)
1921—*T. E. Anderson, Statesville (Iredell)
1922—*H. A. Royster, Raleigh (Wake)
1923—*J. W. Long, Greensboro (Guilford)
1924—*J. V. McGougan, Fayetteville (Cumberland)

1925—*Albert Anderson, Raleigh (Wake)
1926—*Wm. de B. MacNider, Chapel Hill (Durham-Orange)
1927—*John Q. Myers, Charlotte (Mecklenburg)
1928—*John T. Burrus, High Point (Guilford)
1929—*Thurman D. Kitchin, Wake Forest (Wake)

1930—*L. A. Crowell, Lincolnton (Lincoln)
1931—*J. G. Murphy, Wilmington (New Hanover)
1932—*M. L. Stevens, Asheville (Buncombe)
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1934—*I. H. Manning, Chapel Hill (Durham-Orange)

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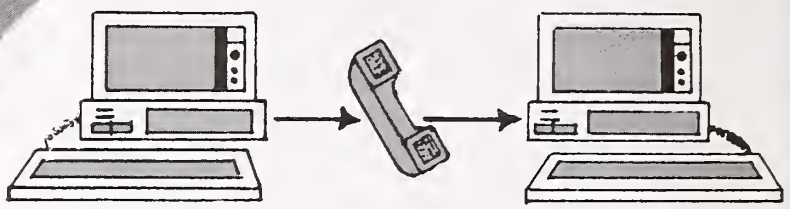
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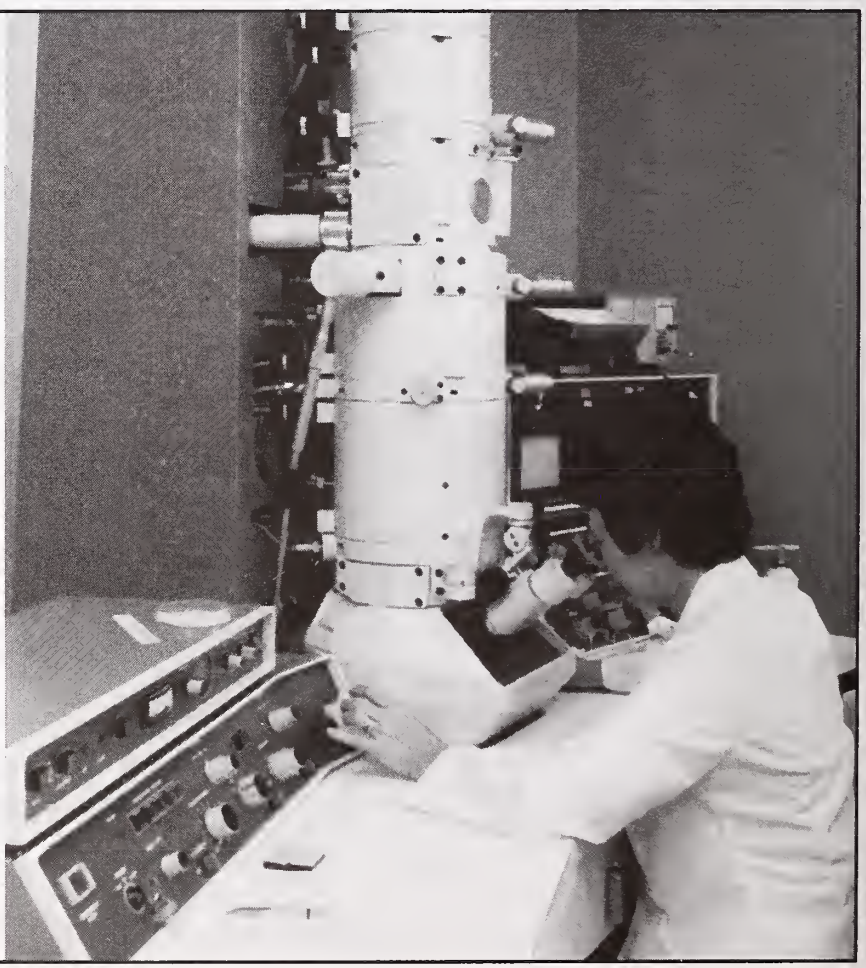
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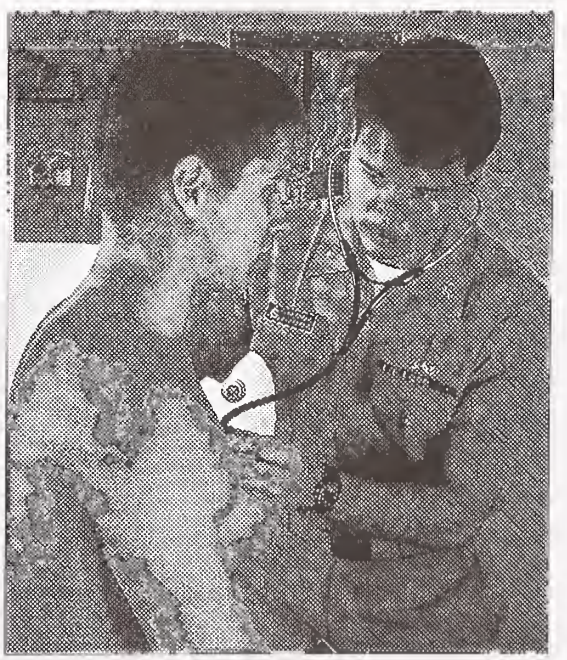
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For respiratory tract infections due to susceptible strains of indicated organisms

Brief Summary.
Consult the package literature for prescribing information.
Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae, Haemophilus influenzae,* and *Streptococcus pyogenes* (group A β-hemolytic streptococci).
Contraindication: Known allergy to cephalosporins.
Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:
- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of non-susceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.
- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:
- Hypersensitivity reactions have been reported in about 1.5% of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of **serum-sickness-like** reactions have been reported with the use of Ceclor. These are characterized by findings of erythema multiforme, rashes, and other skin manifestations accompanied by arthritis/arthralgia, with or without fever, and differ from classic serum sickness in that there is infrequently associated lymphadenopathy and proteinuria, no circulating immune complexes, and no evidence to date of sequelae of the reaction. While further investigation is ongoing, **serum-sickness-like** reactions appear to be due to hypersensitivity and more often occur during or following a second (or subsequent) course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults with an overall occurrence ranging from 1 in 200 (0.5%) in one focused trial to 2 in 8,346 (0.024%) in overall clinical trials (with an incidence in children in clinical trials of 0.055%) to 1 in 38,000 (0.003%) in spontaneous event reports. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy; occasionally these reactions have resulted in hospitalization, usually of short duration (median hospitalization = two to three days, based on postmarketing surveillance studies). In those requiring hospitalization, the symptoms have ranged from mild to severe at the time of admission with more of the severe reactions occurring in children. Antihistamines and glucocorticoids appear to enhance resolution of the signs and symptoms. No serious sequelae have been reported.
- Stevens-Johnson syndrome, toxic epidermal necrolysis, and anaphylaxis have been reported rarely. Anaphylaxis may be more common in patients with a history of penicillin allergy.
- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1% and, rarely, thrombocytopenia and reversible interstitial nephritis.

Abnormalities in laboratory results of uncertain etiology.
- Slight elevations in hepatic enzymes.
- Transient lymphocytosis, leukopenia, and, rarely, hemolytic anemia and reversible neutropenia.
- Rare reports of increased prothrombin time with or without clinical bleeding in patients receiving Ceclor and Coumadin concomitantly.
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly).

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Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285.

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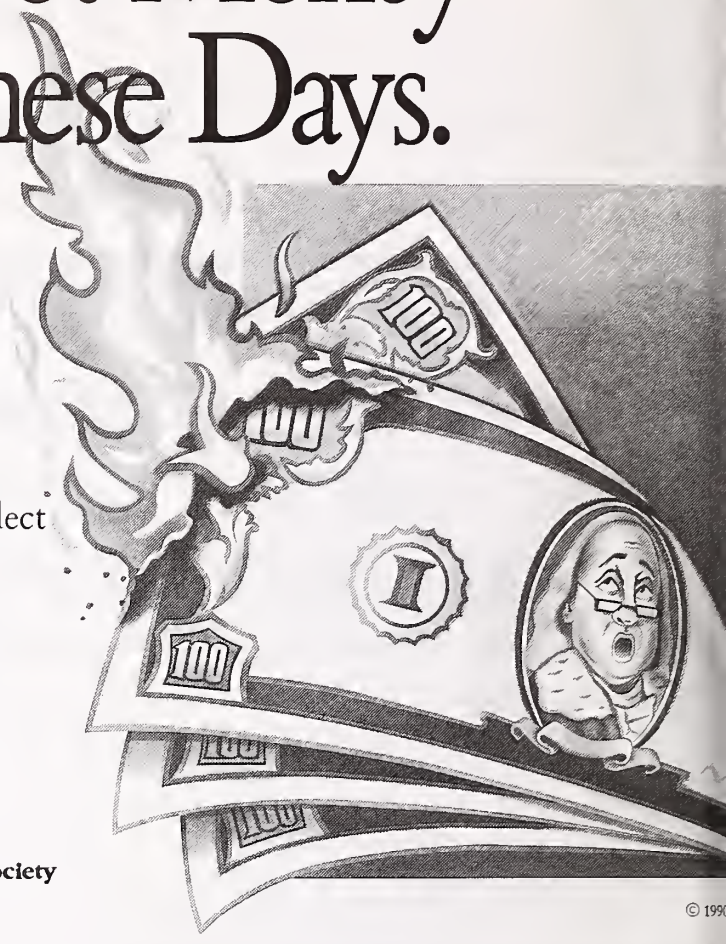
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For Doctors and their Patients



Bob Pittman

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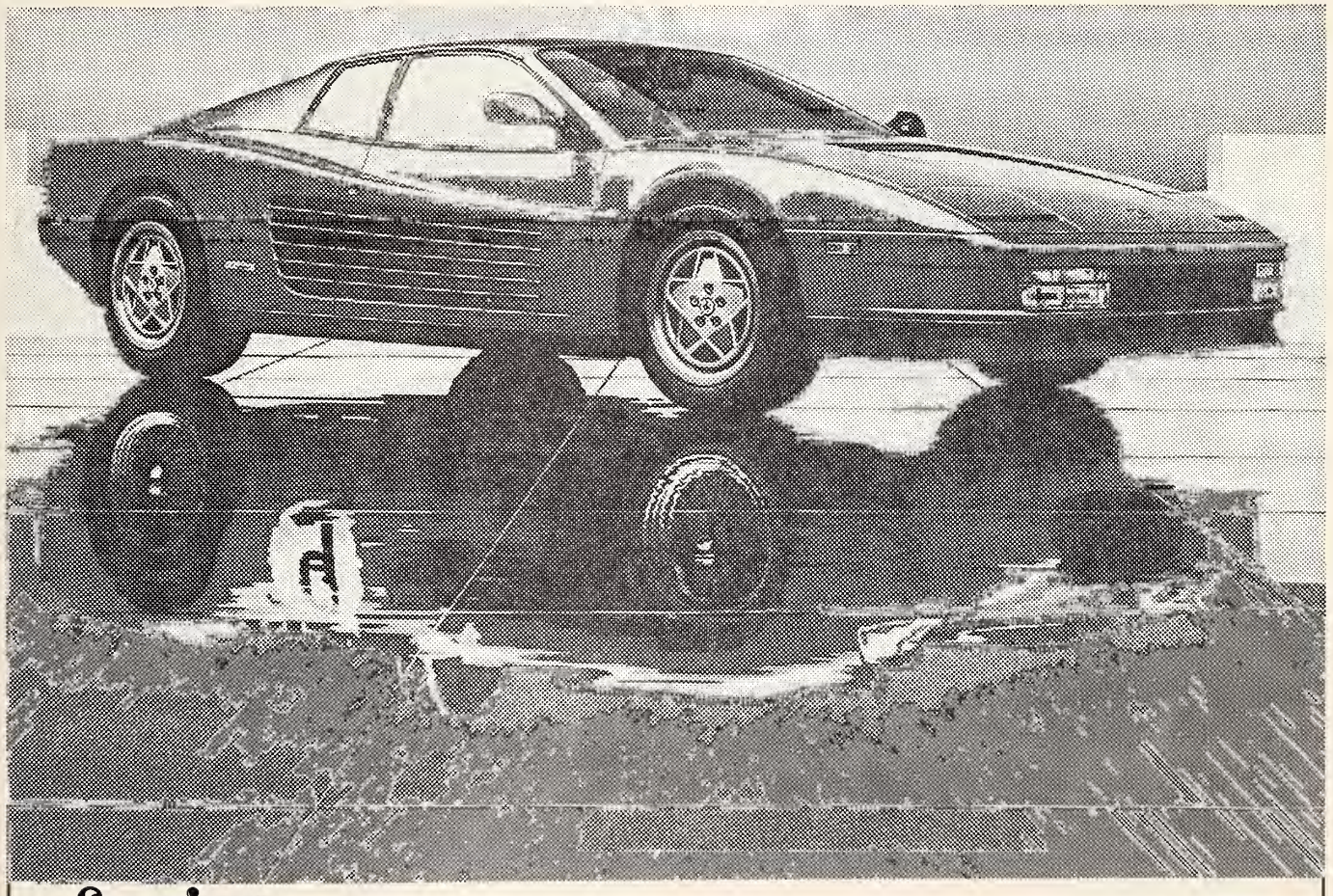
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FOR DOCTORS AND THEIR PATIENTS

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The Medicare Problem

Edited by Eugene W. Linfors, M.D.

Question: Recently I have read of a doctor who stopped treating his Medicare patients because of a combination of problems with unpalatable regulations and inadequate reimbursement (*AMA News*, May 18, 1990). Also, I know of several doctors who, on the advice of business managers, are no longer accepting Medicare patients. What should we as doctors do with this dilemma?

Benjamin Wofford, M.D., General Practitioner in Catawba

Since I am the doctor referred to in the above question, allow me to make a correction in what was said: I did not stop treating *all* my Medicare patients, as implied; I did stop treating those who lived outside our village and its immediate surroundings. Being of the old school, I feel an obligation to care for those people who would otherwise have no one to whom they could turn, regardless of their status—rich or poor, Medicare or otherwise.

Indeed, this is the way in which I deal with Medicare & Company. If someone is part of our community, that person is my patient—if he or she will have me.

Even so, I do not accept assignment. My philosophy is this: I work for the patient, not the government; I therefore look to the patient for payment, not the government. If the patient has money, well and good. If not, that is all right too. I see them at no charge and count it as partial payment against the uncountable debt that I owe to those who have been good to me in the past, people I can repay in no other way.

What is appropriate for me, however, may not be appropriate for someone else—in more ways than one. Operating as a sole proprietorship, I have only myself to please in matters such as this. Also, being the only doctor in town, refusing to render care to the members of that town would not only be harmful to public relations, but thoughtless and cruel—and stupid.

Then too, everyone is the product of his or her own personal history. My history includes a kind old gentleman with the most appropriate name of Dr. Hope. He delivered me into this world, set my broken bones and—at appropriate times—brought comfort to my broken heart. He is dead now these many years, but I can still feel his presence by my side listening with me, as the patients relate their history. Explaining to him the reasons for my revolt was exceedingly difficult. Dr. Hope never turned a patient away.

But all that aside, the fundamental question to be addressed is this: What should we as doctors do with this dilemma?

This is no easy question to answer. When the schoolyard bully eats your lunch, there is a tendency to forget why you came to school in the first place. When he threatens to beat the living daylights out of you, there is a tendency to forget everything else—including your purpose in life. Such has been our experience with Medicare's bureaucracy.

Our *dilemma* is the conflict of purpose between professional duty, personal risk, and business demands—all of which come out of the untenable situation with Medicare. The *question* is what can we as physicians do about the dilemma. This question implies that we can do something. But first, are we part of the solution or part of the problem?

Why do we have regulations and limited reimbursement in the first place? Is it because we abused the system and drove up the cost?

There are those who say we did—Congressman Fortney "Pete" Stark to name just one. Is he all wet? If he is right by the narrowest definition of terms, we do indeed have a share in the blame.

There is no debate with respect to the high cost of health care. It is one of the few undisputed truths in the business of health care delivery. That said, are we partly to blame for the high costs?

From Durham Internal Medicine Associates, P.A., 4205 Ban Franklin Blvd., Durham 27704.

Is the cost of health care excessive because we give no thought to the expense of a given procedure (or drug, or study) where some less expensive alternative would serve almost as well? Do we prescribe according to which drug best serves the patient's need, or do we prescribe according to which detail person was last in the office? Worse yet, have we become enslaved to a sophisticated armamentarium at the cost of our clinical skills? Malpractice fears aside, not every headache calls for an MRI scan. Not every wheeze, a chest x-ray. Not every throat, a culture (especially if we are going to prescribe an antibiotic for ten days anyway).

It goes without saying that extra services bring joy to the business manager's heart. They improve cash flow. But is good business always good medicine? True, we must make a profit to stay in business, but is *business* our purpose in life? Have we come to the place where we worship Hermes above Aesculapius?

For two decades (from 1965 to 1985), Medicare presented us with a blank check and we filled in whatever struck our fancy. Did we, like Faust, sell our souls to gain knowledge, power, and riches? And has Satan come now in the guise of Medicare to collect his due?

It cannot be denied that we operate within areas of overlapping interests—conflicting interests if you will. From this it can be argued that we cannot put our own house in order. Because of these conflicting interests, the argument goes, we cannot logically assume the detached, analytical position necessary for diagnosis and treatment. Like the doctor who must accept the care of another for his own illness, or that of his family, we must accept a cure at the hands of some other member of society—namely, the government. Such is the argument.

Personally, I believe that most practicing physicians are more like old Dr. Hope than Herr Faust. Trouble is, society is not necessarily of this same opinion.

Part of the problem lies in the fact that we are judged by what society perceives us to be, not by what we are.

We contribute millions of silent dollars to political action committees while spending virtually nothing to enhance our public image. People like Dan Rather of CBS have the public eye and ear, but when was the last time he or anyone like him had a kind word to say for Medicine? Is it because we contribute nothing to the public good, or is it because we hide our candle under a basket? How long shall we stand by quietly while only *bad* medicine makes the evening news?

What should we as doctors do with this dilemma? One thing we can do is foster a whole-hearted campaign to win back the hearts of our constituency—the people who make up society. We should take a page from the election campaigner's handbook and convince the people that we are still on their side.

But more than that, we must keep it up. Ours is not a one-in-every-four-years campaign (or even one-in-every-two-years). Ours is a never-ending fight for public esteem.

"For two decades ... Medicare presented us with a blank check and we filled in whatever struck our fancy. Did we, like Faust, sell our souls ...?"

Year after year, Pete Stark gets political mileage out of whipping us in public. How is it that we let one ragtail politician ride from term to term on our backs without so much as a whimper?

That said, we must keep in mind this hallowed truth: the public cares nothing at all for statistics and reasoned argument. The public wants blood, or its equivalent.

The public would be as happy with Pete Stark's head on a platter as our own, but we need not be quite so dramatic. Presented with creative imagination, illustrations of what he and his bureaucracy have done to the health care of the elderly would be almost as colorful.

For example, have you not had a case in which a helpless old person was denied the succor of hospitalization because of bureaucratic criteria that made no provision for individual circumstances? Or have you never had to order IVs, special monitoring, consultations or such—services that were not essential—just to get the patient over some bureaucratic hurdle?

What has this done to the cost of health care? These added expenses cost a bundle where the real reason for admission would have cost a great deal less. This is what Pete Stark and his like have done to the cost of health care. We know this, but does the public know it?

Speaking of costs—. Have you never had to "bend the truth" to get a patient in the hospital? What has this cost in terms of your own professional integrity (in your eyes at least)? What have we done to ourselves, acquiescing as we have to the likes of Pete Stark? Does the public know the extent of our sacrifice? I doubt it.

What should we as doctors do with this dilemma? If we have any backbone left, we should fight!

We must fight, but we must do so intelligently. We must not harm our patients in the process and we must not break the law. Both are below our dignity.

To lash out blindly would be a mistake. Our patients have suffered enough already and we must not add to their problem. Individual people, or parts of the program, are not the problem. Pete Stark might look nice in a suit of tar and feathers, but the gain for us would not be great. We must organize with a purpose. We must develop strategy and agree on tactics. We must go for the jugular.

We have no less than four battles to win: One, we must win the battle of public opinion. To do this, we must get our message to the public. Two, we must win the battle with Congress. In short, we must educate Congress. Three, we must capture the opposition and convert them to our point of view. (This would not be as difficult as it may appear at first blush.) Last but not least, we must win the battle of our own souls: we must identify and master our own shortcomings. No single point is more critical than any other. All must be addressed and overcome.

We are certainly capable of a good fight. It is our nature to fight. We demonstrate this almost daily. Let there be a surgical or medical crisis and we fight. In the OR, it is knife, sponge, clamp, and suture. Out on the floor, CPR. Even our quiet, earnest counsel in the office: this too is fighting. If we were to fight for our profession the way we fight for the lives of our patients, we would surely prevail.

But who among us is willing to fight?

Who among us can lead? Who can organize? Who can write? Who can speak? Who has the public ear (or has contact with someone who does)? Does anyone among us have ready access to newspaper editors, TV producers, or anchormen? Is anyone among us personally acquainted with Dan Rather?

To win the battle of public opinion, we must get our message to the public. Discussions among ourselves contribute little. Our forums—as valuable as they are to us—mean nothing to the public. It is a little like Sunday morning service in church: the people who need to hear the sermon are at home in bed recovering from Saturday night's debauchery.

To win the battle of Congress, we must educate its members. Their well intended measures are bankrupting the country and, furthermore, limiting access to health care.

Is it no coincidence that health care expense began accelerating with the introduction of Medicare—nor is it coincidental that access to health care began to slide with the introduction of the government into the health care delivery system. Even worse, patients are dying because of bureaucratic restrictions. We know this, but does Congress? Congress needs to know the bloody truth.

Medicare in its basic, fundamental concept is not altogether a bad idea. The problem has come in its implementation. True, some old people are so poor they don't have a pot to peel potatoes in: they simply cannot afford basic health care. It does not follow however that all senior citizens are poor. Probably half the nation's wealth resides with the elderly. Congress needs to be reminded of this—not just once, but repeatedly.

It is the socialistic philosophy behind Medicare that is amiss. The political structure of eastern Europe is in shambles with the collapse of socialism there. Congress is not blind—but who has called its attention to the parallel between socialism's failure in eastern Europe and the impending failure of Medicare in our own country? Congress needs to be educated, in detail.

Life is never fair, but that does not mean that we have to accept the unfairness wished upon us by Congress. When lawyers are forced to accept assignment on "Legalcare," then we can accept enforced assignment on Medicare. More to the point: has the gross infringement upon our personal and professional freedoms by Medicare's rules and regulations been pointed out to congress in direct and meaningful ways? We must educate Congress.

"Is Dr. Kildare dead?"

If our third strategy is to capture the opposition and win them over to our point of view, we must go at it with intelligent purpose. Pete Stark might indeed look good in a suit of tar and feathers, but has anyone bothered to invite him on a conducted tour of the health care system? Has anyone attempted to make friends with the man? Has anyone made an effort to show him the good side of medicine? Does anyone know Pete Stark's own, personal physician? Is there a chink in Pete Stark's armor—a chink whereby we can get to the man himself and get him to see the problem from our point of view? Pete Stark is not the only one; there are many others in whom we should be cultivating the truth.

Last, but certainly not least—. To win the battle of our own souls, we must address our own shortcomings. Chief among them is the part we play in the high cost of health care. No less embarrassing is the lack of access to health care endured by the underprivileged. Dr. Louis Sullivan, Secretary of Health and Human Services, went even further, suggesting that *quality* of care is also among our shortcomings—i.e., his "Iron Triangle" of Cost, Quality, and Access.

Dr. Sullivan declared that Marcus Welby is dead. But is he now? Is Dr. Kildare also dead? I think not. There are solutions to the problems of cost, quality, and access. If we can transplant organs and fathom intracellular physiology, we are certainly capable of working out solutions to our part at least in matters of cost, quality, and access.

In summary—. What should we as doctors do with this dilemma? As I see it, we have three options: (1) Endure as we have, with or without objections, this punishment at the hands of the schoolyard bully called Medicare—depending upon the vagaries of Fate and the fickle winds of politics to come up with a solution; (2) abandon responsibility for our elderly patients, individually or collectively; or (3) Fight with purpose and intelligence for the right to practice medicine as we see fit regardless of the patient's category—with or without the government's participation.

Details of organization, strategy and tactics are quite beyond the scope of this manifesto—but if anyone is interested, the editors know where I hang my hat.

In closing, think about this: we speak of our nation as the land of the free. But are we really all that free? Have we in fact become slaves to a socialistic system no less deceitful than Communism? And have we done so by neglecting the need to defend ourselves against political expediency and blind bureaucratic behavior?

Ours is one of the most heavily regulated nations in the world—moreso perhaps than the U.S.S.R. With the failure of socialism, that union is coming apart at the seams. Are we to be next? The medical profession is not the only American institution at risk. The entire nation is at risk. The problem with Medicare is only part of the overall problem. Senator Jesse Helms put it quite aptly when he said that the problem with the government is the government.

Our forefathers tossed a few bundles of tea into Boston Harbor to get attention. Can we do less? Or is mine a voice crying in the wilderness?

James S. Parsons, M.D., Chairman, NCMS Committee on Aging

The Committee on Aging has struggled with this dilemma over the past several years. As we all are aware, there are multiple barriers to the delivery of health care to the elderly population. The application of admission criteria has left little room for the consideration of psychosocial issues in the care of the elderly. DRG places a burden on hospitals to accomplish discharges as early as possible in the course of recovery. HCFA through Equicor has added to the burden by mandatory billing as well as disincentives for physicians who are not "participating." It appears that the federal government has directed a rationing of health care in the Medicare population and has placed this burden on the shoulders of the private practitioner.

"...we encourage each physician to write to Congress..."

The demographics of aging will soon produce a population with a majority of Medicare recipients. They will have the highest concentration of healthcare needs and we, as doctors, must provide that healthcare. If we as physicians fail to meet these obligations, government intervention will certainly mandate that we care for this population as part of our privilege to practice medicine. More than likely, Medicare consumers will demand and achieve the mandatory acceptance of assignment on all Medicare billing.

The Committee on Aging has acted as an information resource to both state and federal government agencies. It is to be hoped that as the relative-value reimbursement scale is instituted, there will be more equitable reimbursement for the delivery of primary care. The immediate problems of balanced billing effective in 1991 should be immediately addressed, and we encourage each physician to write to Congress to help correct this problem.

George C. Barrett, M.D., Chairman, NCMS Bioethics Committee

Medicare regulations and inadequate reimbursement coupled with recommendations from physicians' business managers are causing more and more physicians to refuse to treat or even accept Medicare patients. This ever-widening assertion of physician autonomy is creating a dilemma for the physicians and for our patients. What should we do?

These regulations and the inadequate reimbursement are but two symptoms of the ever-increasing demand for expensive medical care at a time when resources to pay for this care are diminishing. Physicians and society collectively are victims of our own success. The federal government through several administrations has responded by attempting to place the burden of rationing health care on physicians to avoid acknowledging that health care is being rationed. When we stop treating Medicare patients or stop accepting new Medicare patients we play into the hands of bureaucrats by diminishing access and at the same time appearing greedy to the general public and to the individual patient.

Business managers are obligated to advise us to stop accepting Medicare patients, for they do negatively impact our "bottom line." However, if we heed the managers' advice and further increase the ever-enlarging number of under-insured persons without suggesting a solution, then in a broad context we are abandoning patients. This action on our part will not contribute to a solution. It will compound the societal problem one patient at a time. This enhances the perception that we are uncaring and self-serving.

This dilemma will be resolved only when our society comes together and develops a program that can be supported by physicians, hospitals, insurers, small businesses, large businesses and attorneys. The program must assure access to quality health care for all. It cannot and should not be the responsibility of the health care providers to develop the solution. It is clearly the responsibility of the health care providers to call attention to the fact that this is a problem in our country begging for a solution. It cannot be solved with piecemeal, patchwork efforts.

We have for too long collectively asserted that government regulation interferes with the doctor-patient relationship. Indeed it does; however, we are happy to receive third-party payment as long as that payment is what we say it should be. This is desirable but it is unrealistic to expect that philosophy to continue to be acceptable as resources available to provide health care decline and as demand increases. The doctor-patient relationship is a beautiful and sacred one. It is also unique in that when a patient presents to a physician the relationship established is a strikingly unequal one, for the patient is vulnerable, his body is unable to respond because of illness and the patient is more dependent on the physician than in other adult human relationships. When physicians equate interference in this relationship with money or with an interference in our autonomy, we do a disservice to the true meaning of the doctor-patient relationship.

"The federal government ... has responded by attempting to place the burden of rationing health care on physicians to avoid acknowledging that health care is being rationed."

As practicing physicians it is incumbent upon us, I believe, to continue to treat Medicare patients. At the same time it is incumbent upon us as a profession that is organized and has a collective voice to assure that we use that voice to speak clearly to the public, acknowledging that health care is being rationed not by the physicians but by third-party payers, and in this particular instance the

Federal government. It is even more important that as an organization of physicians we call attention to the fact that this problem exists, that we deplore the problem, that we want to be a part of the solution, that we will participate in searching for a solution, but that we cannot provide the solution. Any other course of action on our part is going to prolong the problem and expand the perception that we are not interested in helping to create a just society in the United States.

That does a disservice to us as a profession and as individual practitioners of the art and science of medicine.

Editor's Comment

This forum was chosen because it is very difficult to pick up any medical publication these days without reading something about new restrictions on Medicare payments.

Also, I have spoken with many colleagues who are no longer taking new Medicare patients.

It is an extremely important question, and I appreciate the candid opinions of our responders. ❑

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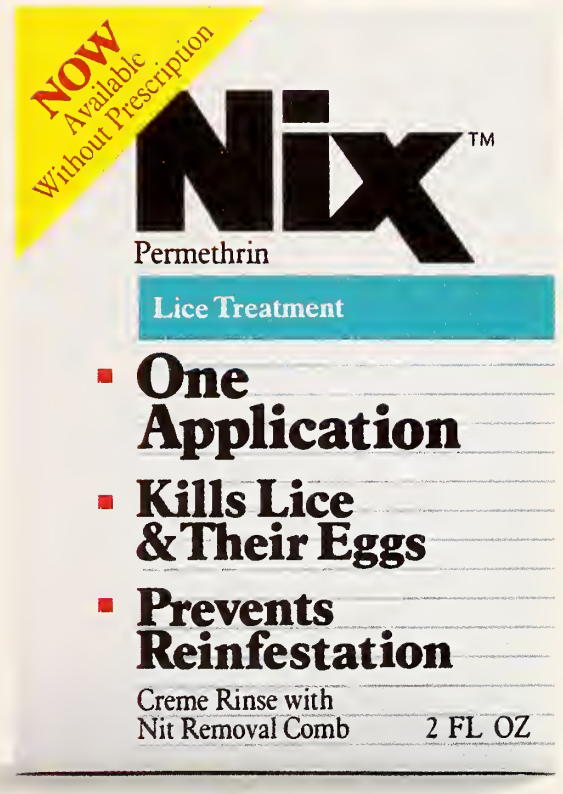
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Radiotherapy for Non-Melanoma Skin Cancer

Dispelling the Myths

Mitchell S. Anscher, M.D., and Robert E. Clark, M.D., Ph.D.

The most common malignant neoplasm in the United States is non-melanoma skin cancer, with more than 500,000 new cases reported annually,[1] resulting in an estimated 2,200 deaths in 1989.[2] Over the past 30 years, the use of radiotherapy for these tumors has declined, due to the increasing prevalence of surgical specialists who deal with these lesions, as well as a reduction in the number of dermatologists giving radiotherapy in their offices.[3,4] However, most of these tumors arise on the head and neck, and depending on location and the extent of surgery required, the potential for significant functional and cosmetic loss following surgery may exist. For example, lesions arising at certain anatomic sites, such as the lateral nasal ala, nasal labial crease, the medial canthus of the eye, and/or root of the nose, may invade deeply and their depth of invasion may be difficult to ascertain preoperatively. Thus, on occasion, tumor may be left behind following resection, or the surgeon may be faced with a more extensive operative procedure than originally planned.

In the past, local irradiation was considered a mainstay of the treatment of skin cancer. Radiotherapy remains an effective treatment for non-melanoma skin cancer. With proper patient selection and the use of appropriate radiotherapy techniques, more than 90% of these tumors can be cured without serious side-effects.[5-8] This figure represents the cure rate achieved when all non-melanoma skin cancers are grouped together. External beam irradiation and implantation give equally good results. In general, smaller skin cancers are more readily cured than are larger lesions, and previously untreated skin cancers are cured more often than are recurrent tumors.[9,10] While some authors have found that basal cell cancers are more easily cured with radiation, most find no difference in radiocurability between basal cell and squamous cell carcinomas.[5-9,11]

The primary difference between basal cell and squamous cell carcinomas is that the latter may metastasize to regional lymph nodes in about 5% to 15% of patients while the former almost never metastasize.[3,5,6,8,11] Nevertheless, the incidence of lymph node metastases in squamous cell skin cancers is low enough such that treatment of the regional lymph nodes is not recommended in the absence of palpable nodal metastases.[3,11] Thus for the purposes of this article it will not be necessary to distinguish between basal and squamous cell carcinomas of the skin, and the term "skin cancer" will refer to both squamous cell and basal cell carcinomas.

In spite of the high success rate that radiotherapy enjoys in the treatment of non-melanoma skin cancer, certain misunderstandings have been perpetuated regarding radiotherapy for skin cancers which may make physicians reluctant to select patients for this treatment in spite of the potential benefits. The purpose of this article is to dispel these myths and to assist physicians in deciding which patients with non-melanoma skin cancer may be appropriate for radiotherapy. Before undertaking this task, however, certain basic principles of radiotherapy must be reviewed.

When prescribing a course of radiotherapy, the Radiation Oncologist must decide how much radiation is required to cure the skin cancer. The probability of achieving a cure of the skin cancer, however, must be balanced against the likelihood of producing skin necrosis. Based on previous experience in treating large numbers of non-melanoma skin cancers in humans, Von Essen and others have determined the number of treatments and total dose which must be given to achieve a very high probability of curing a skin cancer with a very low risk of skin necrosis.[12,13] These authors found that the larger the volume of tissue to be irradiated the more protracted the course of irradiation need be with a smaller daily dose. In other words, small skin cancers may be treated with high daily doses over shorter periods of time, but larger skin cancers must be treated with low daily doses over longer periods of time.

From the Division of Radiation Oncology (MSA) and the Division of Dermatology (REC), Duke University Medical Center, Durham 27710.

Myth #1: Skin cancers invading bone and/or cartilage should not be treated with radiotherapy

These lesions are generally very advanced at presentation; however, even early skin cancers on the nose and pinna may invade cartilage. While extensive skin cancers may be more difficult to control with any modality, invasion of bone and/or cartilage, per se, is not a contraindication to radiotherapy.[6,14-17] Successful irradiation of previously untreated skin cancers invading bone and cartilage are well-documented in the literature, with about half of these advanced cancers being controlled with radiotherapy alone.[6] If radiotherapy is not successful, about half of the recurrent cancers may be cured by subsequent surgery resulting in an overall control rate of 75% to 80%.[6] Because of the extent of local spread that these lesions manifest, however, a large volume of tissue may need to be irradiated. Given the general principles of radiotherapy outlined above, such treatment would require a prolonged highly fractionated course of high dose radiotherapy (e.g. 6,000 to 6,500 rad in six to seven weeks). In deciding between radiotherapy or surgery, the physician must determine whether or not adequate surgical margins can be achieved and whether or not the bone, cartilage or other tissue to be removed is expendable without producing major functional and/or cosmetic loss. If these criteria cannot be met by surgery, then radiotherapy is indicated as primary treatment.[6]

Myth #2: Though large skin cancers may be cured by radiation, the patient will be left with a large, unhealed soft tissue defect

If the radiotherapy has successfully destroyed the cancer, the resulting soft tissue defect will usually heal very well by secondary intention. Many examples are present in the literature of very large soft tissue defects, produced by successfully eradicating an extensive skin cancer with radiotherapy, which healed without the need for surgical closure.[3,7,11,18,19] The ability of a large defect to heal without surgical grafting depends, in part, upon the redundancy and mobility of adjacent tissues.[20] In order to avoid the development of soft tissue fibrosis and/or necrosis and to preserve the mobility of the surrounding tissues, however, the basic principles of time, dose and volume, described above, must be respected by the Radiation Oncologist. Thus, eradication of large deeply invasive skin cancer will require a course of high dose radiotherapy delivered over several weeks (often 6 to 8), but if the cancer is eliminated and if the surrounding tissues are sufficiently mobile, the resulting soft tissue defect will heal.

Myth #3: Radiotherapy requires many weeks and is very expensive

As mentioned above, certain situations do require protraction of treatment over many weeks in order to prevent radiation-related complications, such as when treating skin cancers that are very large and/or deeply infiltrating. Fortunately this is not the case for most skin cancers.

Small skin cancers are different from small cancers in other organs by virtue of their accessibility. The x-ray beams do not have to pass through large volumes of normal tissues to reach skin cancers, in contrast to the situation faced when irradiating, for example, a lung cancer or a colon cancer. Furthermore, appropriate x-ray energies can be selected which deposit their maximum dose in the skin, thus sparing normal tissue beneath the skin cancer. In addition, there is often less uncertainty in determining where the edges of a skin cancer lie than there is in determining the border of a deep-seated tumor, so the radiotherapist may not have to include a large rim of normal tissue around a skin cancer within the treatment field in order to ensure adequate tumor coverage. Thus, when irradiating a small skin cancer there will be a small volume of tissue treated, and according to the general principles of radiotherapy, this will enable a tumoricidal dose to be delivered in a short period of time.

While one cannot make general statements concerning cost and duration of treatment which are applicable to every patient, many small lesions (< 2 cm) can be irradiated in one to two weeks at a cost of $1,500 to $2,500. In contrast, if a skin cancer can be treated with excision and primary closure, the cost is only $300, making surgery a more attractive option in this situation. If a rotational or rhombic flap is required for closure, this increases the cost of the procedure to $600. The need for a skin graft to close the round would increase the cost to about $800. If a multistaged microscopically controlled resection (Mohs procedure) is required, this adds to the cost, and in this situation, surgery and radiotherapy may be comparable in terms of expense. Thus, as with radiotherapy, the cost of surgery will depend on the extent of the procedure necessary to cure the cancer.

In summary, radiotherapy and surgery are complementary, rather than competitive, modalities in the treatment of non-melanoma skin cancer. It is hoped that, by outlining some fundamental principles of radiotherapy and in laying to rest some common misconceptions about the use of radiotherapy for skin cancers, the role of radiotherapy in this disease has become more clear. ❑

Acknowledgment

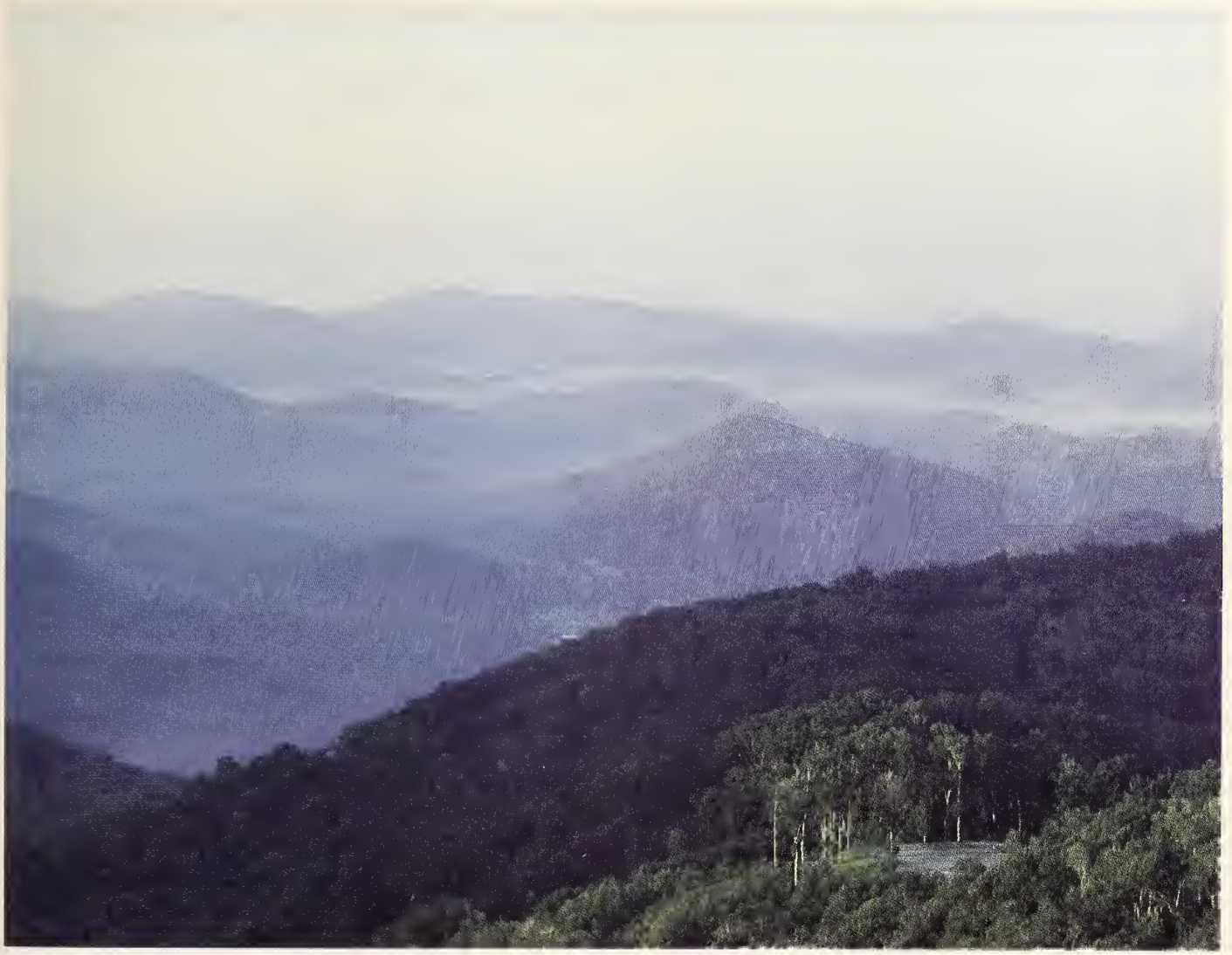
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The Obfuscation Continues

Severe Preeclampsia Versus Thrombotic Thrombocytopenic Purpura

John M. Thorp. Jr., M.D., Steven R. Wells, M.D., Watson A. Bowes, Jr., M.D.

Thrombotic thrombocytopenic purpura (TTP) is a syndrome consisting of the pentad of thrombocytopenic purpura, hemolytic anemia, fever, neurological symptoms, and azotemia. At the onset of the disease, most patients present with a triad of hemolytic anemia, thrombocytopenia, and neurologic abnormalities. When occurring in the gravid or postpartum patient, this disease process is difficult to distinguish from severe preeclampsia with thrombocytopenia. This differentiation is critical because prognosis and therapy differ greatly. We present a patient who highlights this obfuscation.[1,2] She had a clinical diagnosis of severe preeclampsia but at autopsy had histologic evidence of both preeclampsia and TTP.

From the Division of Maternal-Fetal Medicine, Department of Obstetrics and Gynecology, University of North Carolina School of Medicine, Chapel Hill 27514.

Our Patient's Story

A 20-year-old black woman, gravida 2, para 0100, with an intrauterine pregnancy at 26 weeks was transferred to our hospital for management of severe preeclampsia. She had presented to her local physician on the morning of transfer with right upper quadrant pain. Diastolic blood pressures were 80 to 90 and she had 3+ proteinuria. General physical exam was within normal limits. Laboratory analysis included a white blood cell count of 14.9, hemoglobin of 6.9 g/100 mL, hematocrit of 19.9%, platelet count of 7,000, prothrombin time (PT) of 13.7 seconds, activated partial thromboplastin (PTT) time of 32 seconds, fibrinogen of 485 mg/dL, glucose of 81 mg/dL, uric acid of 8.7 mg/dL, and total protein of 5.8 g/dL. Her peripheral smear revealed schistocytes and burr cells.

Her prenatal course had been unremarkable. Diastolic blood pressure ranged from 70 to 80 mmHg. One week prior to admission, the patient was spilling 2+ protein, and her diastolic blood pressure was 70. The patient had no past history of hypertension. She had a previous pregnancy complicated by preeclampsia, with a premature delivery of 1250 g stillborn.

The patient, a morbidly obese black female, was alert and oriented. Temperature was 37° C and blood pressure was 133/103 mmHg. General physical exam, including funduscopic examination of the retina, was within normal limits except for mild right upper quadrant tenderness. No hepatosplenomegaly was appreciated. Fundal height was 27 cm. Fetal heart tones were 140 beats per minute. Her cervix was long, thick and closed. In her extremities, 1+ edema was noted and deep tendon reflexes were 1+ without clonus. Ultrasound examination revealed a single fetus presenting as a vertex with normal amniotic fluid; fetal measurements were consistent with 26 weeks, and an estimated fetal weight of 750 g.

Laboratory analysis on admission included normal electrolytes, creatinine of 1.8 mg/dL (normal 0.5 to 1.2), uric acid of 9.3 mg/dL (normal 1.5 to 6.0), total bilirubin of 1.9 mg/dL (normal 0.0 to 1.2), aspartase amino transaminase of 59 u/L (normal 20 to 60), alanine amino transaminase of 17 u/L (normal 20 to 60), lactate dehydrogenase of 2255 u/L (normal 140 to 320), white cell count of 20,200, hematocrit of 22%, platelet of 14,000, PT of 11.7 seconds (control of 12), APTT of 39.3 seconds (control of 32), fibrinogen of 563 mg/dL, and 2+ proteinuria.

Seizure prophylaxis with magnesium sulfate was continued. Because of the unfavorable cervix and poor condition of the patient, the decision was made to deliver this patient abdominally. The patient was given 2 U packed red blood cells and 6 U platelets to prepare for delivery. Cesarean delivery was performed under general anesthesia without

difficulty and a 700 gram male infant was delivered with Apgar scores of 2, 5, and 9 at 1, 5, and 10 minutes respectively. Estimated blood loss was 1,000 cc. Two units of packed red blood cells, 6 U of platelets, and 2,400 mL of crystalloid were given intraoperatively.

A postoperative arterial blood gas showed a pH 7.29, HCO_3-21 mmol/L, pO_2 of 161 mmHg, and base deficit of 10 mmol/L. Two units of fresh frozen plasma were given because her coagulation panel remained prolonged. Blood pressure declined and acidosis persisted with pH of 7.33, pCO_2 of 19 mmHg, pO_2 of 160 mmHg, and HCO_3 of 18 mmol/L. The persistent metabolic acidosis and unstable blood pressure prompted transfer to a critical care unit.

Chest film in the ICU was normal. Following administration of sodium bicarbonate and a dopamine infusion, the patient's condition stabilized. Arterial blood gas levels were pH of 7.38, PO_2 of 99 mmHg, and HCO_3 of 24 mmol/L; hematocrit was 30% and she had 38,000 platelets. The dopamine was discontinued. She did well overnight.

During day two, the urine output was 30 to 40 cc/hr and diastolic blood pressure ranged from 80 to 90 mmHg. Platelet count was 29,000 and her hematocrit was 28%. Chest radiograph revealed no evidence of cardiac failure. Because fluid input was approximately 6 L in excess of output, a dose of furosemide was administered that increased urine output to 100 ml per hour. On the evening of the 2nd postoperative day, her hematocrit was 25%, the platelet count was 10,000, and she was given 2 U of packed red blood cells.

On postoperative day three, the patient had marked shortness of breath. There were rales in both lung fields, and jugular venous distension was noted with the patient upright. Chest radiograph was consistent with pulmonary edema. Blood gas values were pH of 7.34, pO_2 of 22 mmHg, pCO_2 of 53 mmHg, and HCO_3 of 12.1 mmol/L. Intravenous furosemide was administered and arrangements were made to transfer her to an intensive care unit.

As she was being prepared for transfer, she had a cardiac arrest. She was intubated and cardiac resuscitation was begun. Her heart rate did not respond to epinephrine, dopamine, atropine, or calcium. Peripheral pulses were absent and an adequate heart rate could not be established. Resuscitative efforts were stopped after 90 minutes and the patient was pronounced dead.

Autopsy demonstrated diffuse intravascular thrombosis with microthrombi in the heart, pancreas, kidney, gall bladder, adrenal glands, lymph nodes, retina, and brain. Within the heart, the thromboses had resulted in widespread microinfarcts of varying ages. Petechiae were present on the skin and all organ surfaces. The lungs were heavy (580 g each) with pleural effusions. The liver had undergone marked congestion of the periportal sinusoids with focal centrilobular necrosis. Kidneys revealed autolysis of the tubules. Multiple platelet thrombi were found in the arterioles, and the glomeruli showed endotheliosis without subintimal expansion of the small arteries and arterioles (see figure 1). The cause of death was felt to be severe preeclampsia although there were morphological changes consistent with TTP.

Her infant was admitted to the neonatal intensive care unit. He required positive pressure ventilation for two weeks because of respiratory distress syndrome. He was discharged to his grandparents after six weeks.

Discussion

This patient presented with a thrombocytopenic syndrome that we diagnosed as severe preeclampsia. She was treated with prompt delivery and supportive care. At autopsy, she had extensive intravascular thrombosis with microinfarcts in multiple organs. These pathologic findings are similar to those found in patients with TTP.[3]

Although the histopathologic criteria for TTP were met in this patient, there are several features that suggest that preeclampsia was the primary disorder. The patient had been preeclamptic in her first pregnancy and had recovered. In the interval between pregnancies, she was normotensive without any bleeding or renal disorders being apparent. Her presenting symptoms of right upper quadrant pain, hypertension, proteinuria, and edema are

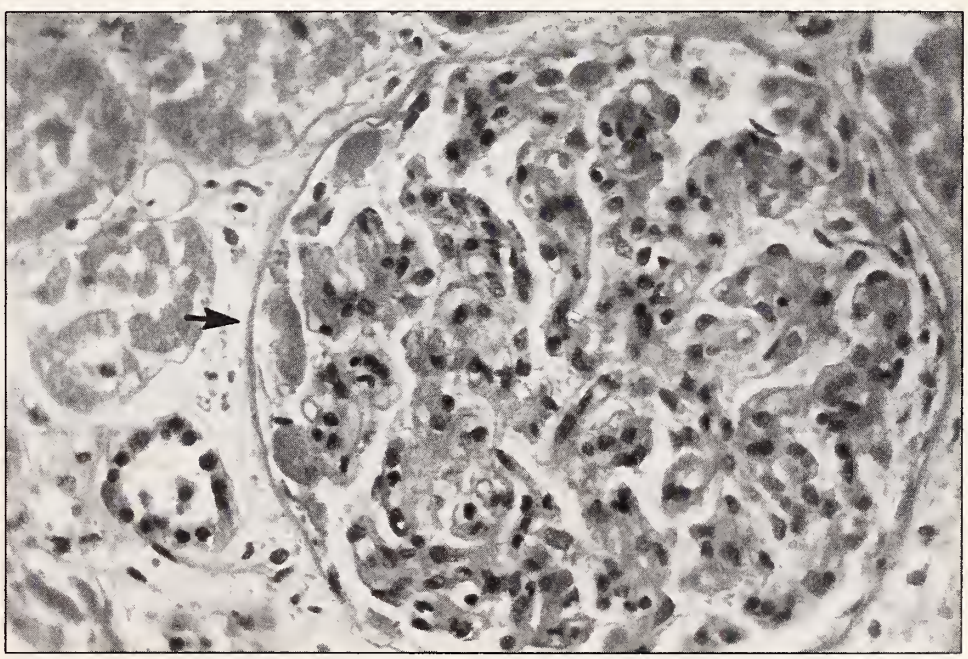


Figure 1. An example glomerular capillary endotheliosis. The endothelial cells are swollen, and deposited within and beneath them are fibrils often mistaken for a thickened basement membrane. This lesion has been reported to be pathognomonic of preeclampsia.

more consistent with a diagnosis of severe preeclampsia. Although her platelet counts were less than 20,000, she did not present with the bleeding complications common in patients with TTP. Fever is part of the pentad of TTP and was absent in our patient. Seizures, aphasia, and alterations in consciousness are the usual neurologic manifestations of TTP. Our patient was alert and oriented up until the time of her death. Most convincingly, her kidneys had undergone glomerular endotheliosis, which is the characteristic lesion of preeclampsia.[4-7]

To our knowledge, this is the first report in which histopathologic evidence of preeclampsia and TTP were confirmed at autopsy. This case report reiterates the conclusion of Schwartz and Brenner that severe preeclampsia may result in an illness indistinguishable from TTP.[1] As Perkins noted in his review of thrombocytopenia in pregnancy, there is a wide variety of syndromes in the gravida that can be manifested by decreased platelet counts.[8]

These two disease processes have similar clinical pictures. Each often results in hypertension, thrombocytopenia, elevated transaminases, hemolytic anemia, and renal failure. Features that may be useful in differentiation include fever that may be present in TTP and is rarely seen in preeclamptic patients prior to delivery, and bleeding manifestations such as petechiae or hematuria, which again are uncommon in severe preeclampsia.

We recently measured levels and multimeric patterns of a von Willebrand factor in six patients with severe preeclampsia.[9] We did not detect unusually large von Willebrand factor multimeric patterns, which have been consistently demonstrated in patients with TTP,[10] in these patients except in one gravida who was later proven to have chronic relapsing TTP requiring splenectomy. Von Willebrand factor levels were elevated in all patients as has been previously reported.[11,12] This leads us to conclude that although TTP and severe preeclampsia with thrombocytopenia have many similarities, the underlying pathophysiology of each disorder may be different.[9]

Often there is difficulty in precisely categorizing the underlying pathophysiology of a clinical thrombocytopenic syndrome occurring in pregnancy. In any patient with severe preeclampsia that develops a TTP-like syndrome, consideration should be given to plasma exchange in addition to the obstetricians' traditional approach of prompt delivery and supportive care.[13]

Recently the perinatology group at the University of Mississippi published their results with plasma exchange in patients with severe preeclampsia. They reported good outcomes in seven patients and suggested the following criteria as guidelines for determining who needs this procedure: platelet counts less than 30,000; rising lactic dehydrogenase (> 1,000 IU/L); and multi-organ dysfunction persisting for over 72 hours.[14] We have cared for a similar group of patients within the University of North Carolina Hospitals since this case and have made good use of plasma exchange in these severely ill women. There remains a need for randomized clinical trials to document the effectiveness of this approach. ❑

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Suspicionless Drug Testing of Physicians

Edward C. Halperin, M.D.

The age of suspicionless drug testing of physicians may now be upon us. In response to the national drug crisis and in recognition of its own needs, Johns Hopkins University and Johns Hopkins Hospital in Baltimore have taken a series of steps to address the problem of personnel chemical dependency. These included the establishment, in 1984, of a Johns Hopkins Alcohol Project to begin to deal with the problem of alcoholism. In 1986 the Hospital established a faculty and staff substance abuse program directed by a professional assistance committee.[1] The physicians who serve on the committee are independent of the hospital administration. They take responsibility for accepting self-referrals from fellow physicians with a chemical dependency problem. In addition, colleagues and department chairpersons may refer staff members. Once a staff member is referred, there is a counseling program with subsequent referrals, as necessary, to outside psychiatrists, counselors, or to the counseling program of the Maryland Medical Society.[2] The professional assistance committee has significant discretionary authority to deal with impaired physicians.

After a long period of consideration, debate, education, and some objections from the medical staff and other employees, Johns Hopkins Hospital's Board of Trustees and medical board have now chosen to add random suspicionless drug testing as a component of their chemical dependency program for physicians. Hospital officials have not indicated that they have any reason to believe that drug or alcohol abuse are more prevalent at Hopkins than at other workplaces. Hopkins Vice President for Medical Affairs, Hamilton Moses III, has stated that "we know there's a problem through all levels of society. We live in a society where drug abuse is prevalent. We cannot assume we're different."[3,4]

In Maryland there are stringent hospital staff credentialing requirements. These include physicians testifying, on forms for hospital admission privileges, that they are free of physical impairments to safe medical practice.[2] The hospital must endorse this claim. In response to the problem of drug abuse and in light of state requirements Hopkins adopted the following policy:

> "Drug use has become a plague in our country. The members of the medical staff of the Johns Hopkins Hospital deplore this and wish to propose that Johns Hopkins Hospital should work toward becoming a drug free environment. The existing policy of the Johns Hopkins Hospital regarding the use of drugs of abuse, including alcohol, is based upon achieving the institutional goals of protection of our patients, and protection of members of the medical staff whom we view as representing our greatest asset. For all of these reasons testing for drugs of abuse, including alcohol, will be carried out for members of the medical and affiliated staffs during their credentialing and re-credentialing process.
>
> Testing for cause as is now policy will also be carried out when appropriate.
>
> A confidential, non-punitive drug and alcohol treatment (rehabilitation) program designed specifically for physicians will continue to be provided for those members of staff for whom such a program will be beneficial. Implementation of the policy will begin with the active staff. Implementation will include other members of the medical and affiliated staff as discussions and consensus formation is achieved in those groups."[5]

Staff physicians at Hopkins, as at most other hospitals, must renew their clinical privileges on a biannual basis. In addition to the usual re-credentialing procedure, Hopkins physicians, during the time of re-credentialing, now must agree to submit to randomized drug testing. A breathalyzer test, urine sample, or both will be required at random from a still to be determined proportion of the physicians applying for initiation or renewal of privileges. The breathalyzer test

From the Division of Radiation Oncology, Duke University Medical Center, Box 3085, Durham 27710.

and/or urine sample will be used to analyze for alcohol, marijuana, cocaine, amphetamines, PCP, and opiates.[3] If a physician tests positive, he or she will be retested. If a positive test is confirmed, then a medical review will assess whether the test result stemmed from a medically indicated drug, some other substance, or an illicit drug. Those deemed to be positive as a result of drug abuse will be referred to the professional assistance committee. If a physician tests negative, the credentialing procedure will proceed.[2-6] The question of what is to be done with physicians who refuse to participate in the program because they view drug testing as an invasion of privacy has not yet been decided.[2] All hospital employees will be subject to drug testing if there is reason to suspect a problem. It is possible that, eventually, nurses and house staff may be included in the routine testing program.[3]

One can think of several arguments in favor of randomized, screening drug testing of physicians. These include:

1 Physicians must provide moral leadership on the issue of drug abuse. As America strives to be a drug free society, physicians must lead the way in being willing to demonstrate publicly that they are untouched by illicit substances. If one wishes to ensure that all hospital employees are "drug-free," then one must start with the physicians.
2 Medicine, as a profession which involves life saving and life threatening procedures, has a special obligation to free itself of impaired practitioners. Randomized drug testing will help fulfill that goal.[7]
3 Johns Hopkins Hospital is within its legal rights and is surely justified in ensuring that its staff is free of illegal and impairing drugs and may, therefore, impose upon a perceived right of privacy to fulfill that goal. Admitting patients to the hospital is a privilege, not a right. Admitting privileges should be subject to control. Those individuals given responsibility to control admitting and practice privileges may deny such privileges to impaired physicians.
4 The usual credentialing process, relying on letters of recommendation and peer evaluation, may not detect or control the drug or alcohol impaired physician. Even trained observers are frequently unable to detect drug abuse.[2]
5 Those who have done nothing wrong have nothing to fear from randomized drug testing. It will merely be a slight inconvenience. Procedures for efficient, reliable drug screening have been well established by corporations and the military.
6 When people know their behavior is being observed they often change. The mere existence of testing may decrease substance abuse.[8,9]
7 The drug testing program need not be heavy-handed. Physicians who test positive will not lose their license or be reported to the police. They generally will be referred for counseling and treatment.
8 The financial costs of drug testing will be off-set by the saving in terms of a reduction in absenteeism, poor practice, and resultant litigation. The savings in human terms (i.e., a decrease in drug abuse associated with illness and death) are immeasurable. We cannot ignore the problem of substance abuse by physicians. One recent study identifies a 2% prevalence of substance abuse among anesthesiology residents. Within this identified group of abusers, the drug associated mortality/severe morbidity rate was 15%.[10]

One can, on the other hand, also think of a series of objections to randomized drug testing of physicians as part of the credentialing procedure. These include:

1 The Bill of Rights of the United States Constitution protects individuals from unwarranted search and seizure.[11] While legal nuance may indicate that this protection does not pertain to the actions of a private hospital as opposed to the police actions of the Government, the right to protection from unreasonable search seems fundamental to our lives and culture. Our basic right of privacy should not be violated by a bodily search for drugs in the absence of just cause. If a physician appears to be acting in a strange or inappropriate manner, then the appropriate authorities may require that he or she undergo drug testing. In the absence of cause, however, breathalyzer and urine tests are an unwarranted bodily search. The way one behaves in the privacy of his or her own home is not the business of the hospital, which should concern itself with the way one behaves in the operating room, emergency room, or clinic.
2 Hospitals should already have in place committees charged with identifying and dealing with impaired physicians. These will include the hospital board charged with credentialing as well as appropriate peer review committees. If these committees are doing their job and receiving the cooperation of staff physicians, random drug testing should be superfluous.
3 Physicians are certainly not the only health care professionals who conduct life threatening or life protecting procedures. If one insists that physicians be subjected to randomized drug testing, what about the cardiopulmonary bypass pump team in the operating room? Respiratory therapy technologists involved in operating respirators? Intensive care, cardiac care, and surgical intensive care nurses? The list would quickly become enormous. Indeed, Hopkins appears to have left open the possibility of eventually extending testing to non-physician staff.[3] How will questions of equity be decided (i.e., who gets tested?) if the program is extended?
4 Physicians can rapidly learn the half life of prohibited substances in the urine and on breathalyzer tests. Behavior might be modified to specifically subterfuge the tests if the date of testing were known in advance by the casual drug user. The heavily addicted user could well be detected—but such a user would likely already have aroused the suspicion of conventional peer reviewers.
5 The provision of the urine specimen or breathalyzer test is, perhaps, only a

limited invasion of privacy. But how will the system ensure that the urine specimens are not tampered with, or that substitute specimens are not switched for the requested specimen? Some might argue that proper urine screening requires that specimen collection be done under conditions of direct observation of urine flow from urethra to container. One form of monitoring used by the U.S. Customs Services's testing program for agents required that "a monitor of the same sex as the employee remains close at hand to listen for the normal sounds of urination. Dye is added to the toilet water to prevent the employee from using the water to adulterate the sample."[4,12] It has been suggested that urine temperature measurements may be substituted for visual or aural observation in an attempt to avoid specimen substitution. In any case, a completely documented chain of custody must be utilized for every specimen. If not, then the evidence of a positive specimen might not stand up in subsequent litigation.[9] If specimen collection is observed, then genitourinary anatomic abnormalities will be detectable by an observer. Why should anyone have access to that information? Isn't *that* an invasion of privacy?

Those who have done nothing wrong have everything to fear from randomized drug testing. What will protect individuals against abuse of the system? How will we protect against specimen mix-ups, manual transcription errors, and phony specimens?[8,9] Who will decide who gets randomized testing? Who will decide about the review of false positive specimens? Who will operate the counseling procedure and will it be confidential? Who will protect individuals against capricious abuse of the system in order to settle old hospital political feuds, academic disputes, and personality conflicts? Couldn't urine be tested, without the specimen provider's knowledge, for pregnancy, diabetes, anti-epileptic drugs, etc.? Will the legal system make drug testing information confidential in all states or will plaintiffs' lawyers be able to obtain results of drug testing for use in malpractice suits? The accuracy of laboratory studies for various drugs is highly variable—and there is no laboratory test for impairment of physician function.

7 The statistics of sensitivity, specificity, and predictive value of testing in a population expected to have a low prevalence of drug use guarantees many false-positives and false-negatives in relation to the number of true abusers detected.[9]

8 The financial cost of urine and breath screening will be high. Hopkins will confirm every positive urine screen with spectroscopy. Each screen will cost, on average, $30.[2]

"There is a tendency, in our society, to react to real or perceived threats by eliminating basic civil liberties. I would submit that voluntary abrogation of our rights is generally a grievous error."

There is a tendency, in our society, to react to real or perceived threats by eliminating basic civil liberties. I would submit that voluntary abrogation of our rights is generally a grievous error. The fundamental right of freedom from unwarranted search, so cherished by Americans, deserves protection. The Fourth Amendment to the United States Constitution provides that "the right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures shall not be violated, and no warrants shall issue but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized."[9]

In my judgment, the Fourth Amendment's invocation of "probable cause" prior to search deserves emphasis in the case of suspicionless drug testing of physicians. Recent decisions of the U.S. Supreme Court have defined the interface between drug testing and "search and seizures.[12-14] The high court has held that obtaining blood and breathalyzer tests for drugs infringes upon the expectations of privacy that our society may be willing to recognize as reasonable. Ensuing chemical analyses of samples to obtain data is a further invasion of an individual's privacy interests. Collection of a urine sample, which may involve visual or aural monitoring of the act of urination, also implicates privacy interests. A recent Federal appeals court decision stated:

> "There are few activities in our society more personal or private than the passing of urine. Most people describe it by euphemisms if they talk about it at all. It is a function traditionally performed without public observation; indeed, its performance in public is generally prohibited by law as well as social custom."[12]

Within the last year, the Supreme Court has defined instances where, in its view, compelling Government interests exceed personal privacy to allow suspicionless drug testing. These situations include the testing of U.S. Customs agents who have requested promotion and would be involved in drug interdiction and/or be required to carry firearms[12] as well as railroad employees following a train accident or the violation of safety rules.[13] The Court also has recently found that Michigan's highway sobriety checkpoint program, under which all vehicles passing through a checkpoint are stopped and their drivers briefly examined for signs of intoxication, was sufficiently useful, and so "minimally" intrusive, that it did not violate the Fourth Amendment.[14]

The Fourth Amendments' protections may be invoked for some measure of protection from unwarranted searches and seizures by government officials directed against individuals. As such, it is a defense against unwarranted search by the police or other agents of government—including, to some extent, government supported hospitals. Former Supreme

Court Justice William Brennan has said, "It's a high standard the Framers wanted and it means that no search may be conducted unless the official knows the facts and circumstances that warrant a prudent man to believe that an offense has been committed."[15] A private hospital, such as Johns Hopkins, is not held to this standard and does not impose upon Constitutional rights in doing urine and drug testing of staff physicians. Unable to invoke the Constitution, legal protection from drug testing of physicians might, however, be sought in the law of contracts, i.e., "My contract with this private hospital never said or implied anything about drug testing."

"Hopkins may be guilty of an immolation of privacy, collegiality, and human dignity in the course of public symbolic opposition to drug use."

The issue is *not* whether declaring war on illegal drugs is good hospital policy—of course it is. Rather, the issue is whether a draconian compulsory bodily search is an appropriate weapon in this war. "History teaches," writes Justice Thurgood Marshall, "that grave threats to liberty often come in times of urgency, when constitutional rights seem too extravagant to endure."[13] The World War II relocation of Japanese-Americans, the Palmer raids and the Red Scare, and the McCarthy era are extreme reminders that when our society allows fundamental freedoms to be sacrificed for a real or perceived emergency, we invariably come to regret it.[13-15] "The greatest dangers to liberty lurk in insidious encroachment by men of zeal, well-meaning but without understanding," wrote Justice Brandeis half a century ago.[16]

I wonder if the driving force for the Hopkins testing program is really to identify the few impaired physicians missed by conventional peer review? A more plausible explanation is that the hospital wishes to show it is serious about the "war on drugs" by taking a very public act. Surely, one would have to start with physicians if the ultimate goal is to extend suspicionless testing to nurses, pharmacists, house staff, and others. Such an argument would sit well with the corporate executives who frequently sit on a hospital Board of Trustees. These CEOs might be susceptible to the argument that if their factory must be symbolically drug-free, so must the hospital. Hopkins may be guilty of an immolation of privacy, collegiality, and human dignity in the course of public symbolic opposition to drug use.[12]

In my opinion, if a physician has done something wrong or is acting in a peculiar or dangerous manner, then submission to drug testing under the authority of peer review or credential boards may be appropriate. The randomized testing of innocent physicians, who have done nothing wrong and nothing to cause suspicion, is an unwarranted bodily search which should be resisted. While I acknowledge the serious threat to patients presented by the substance-impaired physician, I cannot accept the notion that a component of the solution is randomized drug testing without specific cause. Even if you were willing, yourself, to submit to drug testing, would you be willing to deny clinical privileges to a respected colleague who refused to be drug tested on the grounds that it was a violation of his or her sincerely held belief in a protection against unreasonable search? Would you be prepared to accept observed urine testing in fulfillment of some goal to create a "drug free hospital"? What other aspects of your behavior would you be willing to submit to scrutiny?

I believe that the particular action of Johns Hopkins Hospital to introduce random drug testing into its substance abuse program was ill advised. Drug abuse, including tobacco and alcohol, are unquestionable threats to our society. In acceding to breathalyzer and urine testing, however, we violate the time-honored and textually-based principles of the Bill of Rights.[13,15] Physicians must take a stand for both a drug-free society and the fundamental right of bodily privacy. ❑

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Another View

Dr. Halperin and I differ about the Hopkins requirement for compulsory drug testing.

When the rules of the game are established, the players either follow them or elect not to play the game.

If the batter in baseball always runs to third base instead of first base, he will be asked to leave the team.

The rules of academia require the academician to communicate in a scholarly way with his colleagues. The dictum is publish or perish. I see no objection to the rule. If you don't wish to play by the rules of the game, don't complain when your appointment is terminated.

Johns Hopkins has made a rule that health personnel be tested for drugs. It seems simple to me. Play by the Hopkins' rule or go elsewhere.

Eugene A. Stead, Jr., M.D., Editor

Dr. Halperin's Reply

If you are going to play the game, then you have to obey the rules. Among the rules that baseball players, physicians, and hospital administrators have to obey are the Bill of Rights of the United States Constitution. These rules prohibit the unwarranted search of innocent people.

Johns Hopkins has made a rule that physicians be tested for drugs without probable cause or suspicion. It seems simple to me. Hopkins ought to play by the rules of the Constitution and rescind its directive. Those who need to "go elsewhere" are the individuals who impose on the fundamental rights of free men and women.

E.C. Halperin, M.D., Associate Editor

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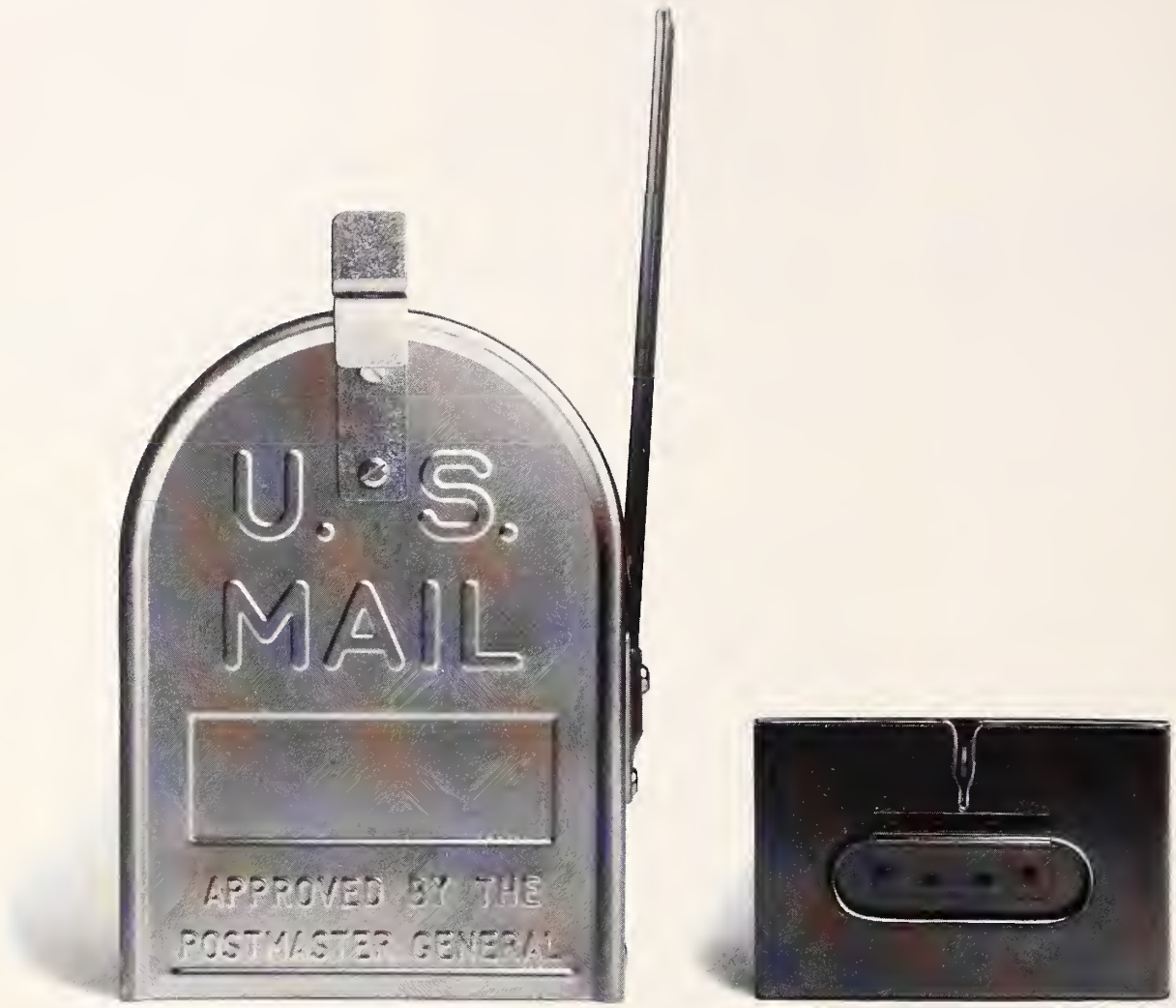
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The Debate Over Animal Rights

Conrad B. Richter, V.M.D.

I am deeply concerned, as all Americans should be, over the casual dismissal of scientific data and fact in favor of unsubstantiated opinion by animal rights activists. The misrepresentation of decades of work that has produced scientific evidence by the most rigorous and thoroughly reviewed system possible should be a cause for alarm for all citizens.

In many ways the arguments of the activists are reminiscent of the fundamentalists who refused to believe that we had put a man on the moon. It is frightening to believe that animal rights activists can seduce a sizable segment of the public into accepting their statements as factual, and it is equally frightening to hear them casually dismiss acts of terrorism committed against law abiding citizens as simply the misguided excesses of a few individuals on the fringe of a righteous cause.

Dr. Richter is Professor and Director, Division of Laboratory Animal Resources, Duke University Medical Center, Durham 27710. This article is adapted from remarks broadcast on WUNC-FM radio, Chapel Hill, June 1990.

Public Naivete vs Scientific Expertise

The scientific issues that animal rights activists make arguments over are not issues that can be resolved in the arena of public debate, but must rather be resolved in the laboratory by scientific methodology as established by those qualified experts in the science. In their statements attacking science, some animal rights activists repeat many of the same horror stories that have now become so familiar and many of the distortions that have been used to mislead or otherwise influence a public that has great sentimentality toward animals.

At the same time, animal rights activists take advantage of a basic mistrust of science by a public that understandably has little knowledge of the scientific process. It is clear that scientists must devote much more time to the business of communicating their work in terms that can be understood by the public and that will instill confidence. It is not good enough to expect the public to blindly accept what we do in science. It is equally clear that the public must make a better effort to understand science or we shall all be losers.

From the day we are born until the day we die, we are first and last biological creatures, yet many of us are surprisingly ignorant of biology and take all the magnificent achievements of science over the past half century for granted. Incomprehensibly, we do not even require our high school students to take courses in biology. Yet we inherit, metabolize, reproduce, get sick, get well, grow, age, and die, all by biological processes, without which we could not learn to walk, talk, reason, or watch television, let alone invent television. We take our current life expectancy, which is about 72 years for men and 79 years for women, for granted. It is our inherent right to live that long, or so we believe, and furthermore, why do we not live longer?

These are biological questions that require answers that can come only from the laboratory. Activists can argue a case for animal rights indefinitely, but they will not advance the knowledge of biological science or advance human life expectancy one single day in the process. But if they are successful in their efforts to abolish the use of animals in research, they must be accountable for the results of their activity and its effect on our ability to pursue the natural human goals of longer life and better life.

On the Threshold of Knowledge

Have we now gained all the knowledge that we ever need to know about the enormously complex biology of animals and humans so that we do not need animals as models of disease? It is hard to believe that this could be presented as a serious question. We have just now in

this millisecond of human existence entered the grand era of neurobiology, a century after Claude Bernard did his work, with the tools to understand how the brain works; how it produces and sends the chemical messages and impulses that control our every action and response to stimuli; how and to what extent brain and nerve injury are repaired; what specific individual nerve cells control which very specific areas of brain function; and how we perceive and endure or moderate pain. We stand on the threshold of incredible achievements in neurology, but none of it will be possible without the animal models necessary to elucidate, discover, confirm, demonstrate, and characterize.

We stand also on the threshold of unbelievable advances in genetics through our burgeoning knowledge of gene function, gene regulation, gene inheritance, and the artificial insertion of genes into cells by what we call transgenic technology. It is now possible for the first time to introduce functional genes into animals by controlled means! This incredible capability promises eventually to be transposed from the scientific bench to the marketplace of human disease treatment. But that's not all. By inserting multiple copies of genes that regulate growth and cell differentiation into mice, scientists now have a tool to understand how growth regulation relates to cancer and possibly how substances that cause cancer act on these genes to produce neoplasms.

These answers will not happen overnight, and the transposition to the marketplace will take enormous product development time. None of this will be possible without animal models and none of it, no matter how sophisticated, will be possible without public support.

The AIDS Example

The question of AIDS always emerges in the animal rights debate, almost as an "I told you so" kind of argument. "If you guys are so smart, how did this happen?" Good question. Not an easy answer, but this is typical of biological processes. They all have one thing in common—they are enormously complex. While we can grow AIDS virus in tissue culture, higher animals and humans bear little resemblance to tissue culture systems, which are simple populations of cells growing in artificial medium and capable of only limited responses to stimuli. It is clear now that we will not understand AIDS very well until we understand how the AIDS virus kills the host. We know that it attacks specific cells of the immune system, but it is not clear how it kills these important cells over an extended period of time, and we probably won't know until we have better animal models to study this phenomenon. Until we have that, our ability to treat individuals who are already infected will be hampered.

What is fortunate is that this apparently new disease turns out to be caused by a retrovirus. In the early part of the 20th century, Peyton Rouse discovered that he could transmit a tumor of chickens with a filterable agent. That is an agent that was smaller than a bacterium and could pass through a filter that retained bacteria (a virus). Eventually, this filterable agent turned out to be a retrovirus and Rouse later won the Nobel prize for his work. In the 1940s and 1950s, Ludwig Gross demonstrated the same phenomenon in mice and became the first to show that a filterable agent capable of causing tumors occurred in a mammal. This also turned out to be a retrovirus.

In the 1950s and 1960s, Frank Rauscher, John Maloney, Wally Rowe, and others undressed the mouse retroviruses, discovered reverse transcriptase, and many other complex and important aspects of retrovirus virology.

So when the AIDS virus was identified, we had remarkable insight and preparedness to deal with its basic biology. We now know that this is a very complex virus that will challenge our skills to conquer. We now also know, as we might expect, that there are closely related viruses in horses, monkeys, cats, and other animal species. We also know that the AIDS virus will grow, or replicate, in the Chimpanzee, but the chimp does not get AIDS, or at least so far it has not. If we knew why this were so, we might be very rich, indeed.

What Animals, What Rights?

Let me return to the question of animal rights. The debate is philosophical and requires much refinement. As for now, what animals, and what rights? Does the hawk have the right to kill the rabbit? The grizzly bear the salmon? Is it less moral to use animals and the magnificent human mind to investigate causes of blindness, for example, than it is not to do so and let the blind go blind?

I think that the animal rights debate is important, but I'm not so sure about the answer or if one is desirable. If medical and biological science and the knowledge of self are to advance, then scientists must have the models with which to do it. Otherwise, we will draw an iron curtain across one of the most precious of all human endeavors, the gathering of knowledge. If a decision is made to proscribe animal experimentation, it must be made by a scientifically knowledgeable public capable of bearing the awesome responsibility for such a decision. ❑



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Burkitt's Lymphoma



Young American man with the peri- and inframandibular nodal enlargement typical of African Burkitt's lymphoma. Such presentation is infrequent in Americans who usually have massive abdominal lymph node enlargement with hyperuricemia due to the tumor lysis syndrome. The pathological findings are indentical in both forms and the reasons for the differences in presentation are unknown.

(Photograph courtesy of John M. Falletta, M.D.)

Denis Parsons Burkitt was born in 1911 in Enniskillen, Northern Ireland, a town of 8,000 on Lough Erne near Donegal Bay. His family had a legacy of adventure and foreign service in the far reaches of the British Empire; Denis's uncle Roland Wilks Burkitt, FRCS, became the primary medical care-giver in Nairobi long before Denis would first see Africa.

Denis Burkitt's own picaresque life story is chronicled by Bernard Glemser in *Mr. Burkitt and Africa*. After a childhood accident in which he lost his right eye, Denis was sent to two prep schools before entering the University of Dublin. There had blossomed at this time in the British Universities a powerful Christian influence originating with the Cambridge Seven, athletes and scholars who served as missionaries in China around the turn of the Century. After a year of engineering school Burkitt was moved by spiritual conviction to study medicine, which he felt was God's will for him.

Having completed his undergraduate medical education, Burkitt lived for a time in Scotland to study for Fellowship in the Royal College of Surgeons, Edinburgh. Once he obtained the status of FRCSE, he spent five months as surgeon on a cargo ship, sailing through the Mediterranean, the Suez Canal, and the Arabian Sea en route to ports of call in Hong Kong, Penang, and Singapore, among others. Soon after his return World War II erupted. Burkitt volunteered for the Army and was posted in East Africa. It was then that he first visited Uganda, where he was captivated by the physical beauty of the surroundings and charmed by the native Africans. Upon returning home, Burkitt immediately applied for a job in the Colonial Service in Africa. Accepting the post meant another temporary separation from his now-expectant wife; notwithstanding this and other hardships, Burkitt knew that it was his divine calling to go to Africa, and he left Britain in 1946.

It was in 1957 that Burkitt first reported his now famous series of tumors of the jaw found in African children. He thought that perhaps he should have submitted the paper to a cancer journal rather than the *British Journal of Surgery*; he explained that his "egotism craved for publication in that prestigious surgical journal." Regardless, Burkitt's epidemiological study and the serendipitous set of events that led to an understanding of the tumor's nature comprise a remarkable tale of courage and cleverness that reads like a spy novel.

On October 7,1961, Burkitt and two colleagues set out on a 10-week, 10,000-mile journey around East Africa to gather information on the incidence and predisposing environmental factors of their newly recognized lymphoma. Beginning at their home station in Kampala, the men bravely traversed tsetse infested regions of Tanzania and passed the mysterious ruins of Zimbabwe (then Rhodesia) before returning through torrential rains and floods to Kampala. A second and third "tumor safari" were accomplished soon thereafter to cover areas of western and central Africa. With the Assistance of A.J. Haddow, Director of the East African Virus Research Institute, Burkitt described the variable incidence of the lymphoma as a function of temperature and rainfall—leading to the incredible speculation that the tumor might be caused by an arthropod-borne vector, since the incidence of the lymphoma paralleled the incidence of yellow fever.

In March, 1961, Dr. Michael Anthony Epstein chanced to attend a lecture by Burkitt at Middlesex Hospital. Epstein was studying possible tumor viruses and asked Burkitt to send biopsy samples to see whether the tissues might contain viral antibodies. Working with Dr. Yvonne Barr, Epstein detected the renowned Epstein-Barr virus in virtually all tumor samples. Although EBV could not be proven to be the proximate cause of Burkitt's lymphoma, the basic work performed by Epstein and Barr formed the core of future investigation into the genetic characteristics of Burkitt's lymphoma cells.

Despite the offhand remark about egotism, Burkitt remains a modest and self-effacing gentleman who generously acknowledges good fortune and the support of others in helping him contribute so much to the field of oncology. He feels that he cannot legitimately take credit for what he calls "coincidences, or divinely planned happenings, however you like to look at them," that occurred in order to allow the study of the malady which bears his name. In much the same way that Burkitt's lymphoma serves as a model cancer of identifiable character and incidence with recognized risk factors and improving response to refinements in therapy, Burkitt himself stands as an ideal model of the premier physician-scientist: a meticulous observer and student of medicine, with steadfast commitment to the pursuit of scientific truth and a heartfelt compassion for the patient whom he serves. ❑

Brian Kavanagh, M.D., Division of Radiation Oncology, Duke University Medical Center, Durham 27710.

Edward C. Halperin, M.D., Book Review Editor

***Green's Gynecology: Essentials of Clinical Practice*, Fourth Edition, by Daniel L. Clarke-Pearson M.D., and M. Yusoff Dawood, M.D. Little, Brown & Co., 574 pages.**

Reviewed by William A. Nebel, M.D., FACOG, Chapel Hill Obstetrics and Gynecology, Connor Dr., Chapel Hill 27514

Green's Gynecology, Fourth Edition, is the first edition not edited by the late Dr. Thomas H. Green, Jr. Dr. Clarke-Pearson and his colleagues are worthy successors. This clinically oriented book includes chapters on newer material such as breast disease, sexual function and dysfunction, urinary incontinence, sexual assault, and contraception. The 30 chapters are organized into four general sections: general considerations; reproductive endocrinology and infertility; general gynecology; and gynecologic oncology.

Green's Gynecology was and continues to be an introductory book for clinical gynecology. The algorithms on primary amenorrhea, sexual precocity, delayed puberty, secondary amenorrhea, endometrial hyperplasia, breast masses, and postmenopausal breast nodularity are particularly useful, as are the excellent reproductions of diagnostic imaging techniques, in chapter 3.

The first three chapters consist of clearly presented information on gynecologic procedures. However, the discussion of endometrial ablation by laser is incomplete, since it does not include the potential complications of this treatment, the alternatives of resectoscopic electrocoagulation, or the importance of laparoscopic supervision during these procedures. This does not detract from the excellent overall presentation of this vast amount of clinical information.

Chapter 3 contains an excellent discussion of diagnostic procedures including bone densitometry. Although this discussion is technically sound, details about indications and practical applications are limited.

The highlight of the first section is Chapter 4, which displays Dr. Clarke-Pearson's outstanding knowledge of prevention of deep venous thrombosis and pulmonary embolism. His figures emphasize the significance of this problem, showing that 40% of postoperative deaths following gynecologic surgery are from pulmonary embolism, and that pulmonary embolism is the leading cause of death after gynecologic oncological surgery.

I like the importance Dr. Clarke-Pearson places on both physical and emotional preoperative preparation in his introductory paragraph to chapter 5: "Postoperative complications may be reduced by careful patient selection and preparation; the technical skills of the surgeon, excellent intra-operative execution of the planned procedure, and attention to details during the postoperative care are the key to successful surgical outcome. Even in the hands of the best surgeons complications arise and may be managed properly and carefully to ensure the best possible outcome."

Chapter 6, the last in the "general considerations" section, contains a thorough presentation of medical/legal situations by Dr. H. Alexander Easley III. Dr. Easley's legal background enables him to present and develop illuminating historical concepts. Discussions of the living will and power of attorney could have enhanced this chapter.

The second section, on reproductive endocrinology and infertility, develops a good pathophysiologic foundation.

Treatment options for mullerian duplications in chapter 8 should have included hysteroscopic resection. The discussions on pathophysiology of dysmenorrhea and anovulatory disorders are interesting and clearly presented.

The endometriosis chapter is outstanding, emphasizing the tremendous variation of symptoms, with the comment that "It is apparent that endometriosis is more common than generally realized." The information on Duke University Medical Center's experience using the GnRH agonist (Buserelin) is impressive, although no supporting data are given. Caution against potential bone loss and the appearance of hot flashes is emphasized; however, there are no solutions offered.

Dr. Clarke-Pearson's outstanding understanding of anatomy enhances the chapter on general gynecology. The anatomical discussion with pathophysiological correlation of vulvar diseases is exceptional. Human papilloma virus infections of the lower genital tract and all of the currently available therapeutic measures are presented, but there is nothing offered for management of the sexual partner.

Sexually transmitted diseases, including AIDS, is the topic of chapter 15. There is excellent detailed information about treatment; however, advice about prophylaxis and reappearance is less complete.

From the Division of Radiation Oncology, Box 3085, Duke University Medical Center, Durham 27710.

There are objective and thorough discussions of spontaneous abortion, induced abortion, and ectopic pregnancy in chapter 16. Early diagnosis of ectopic pregnancy is highlighted by the comment that "It cannot be overly emphasized that prompt and accurate diagnosis is facilitated by constantly including ectopic pregnancy among the diagnostic possibilities in women of childbearing age who are suffering from abdominal pain and menstrual irregularities." Newer diagnostic modalities, including serial quantitative HCG levels, are mentioned; however vaginal probe ultrasound and serum progesterone are not included.

In chapter 17, Dr. Clarke-Pearson is correct in emphasizing the trend toward conservative management of uterine myomas by using the GnRH agonist; however hysteroscopic removal of submucous myomas is not included. Proper preparation on the part of the surgeon before managing benign adnexal masses is Dr. Clarke-Pearson's message—"to be prepared for the worse finding."

Dr. Lewis Wall is a worthy successor for Dr. Thomas Green in the chapter on pelvic support disorders and urinary continence. His review of pelvic support anatomy is excellent. Postpartum enterocele is discussed but not post-hysterectomy enterocele. Dr. Wall is correct in emphasizing proper diagnosis before undertaking management. Dr. Thomas Green was an advocate of chain cystourethrogram. Therefore, it is ironic that Dr. Wall mentions "previous concepts of the importance of the posterior urethrovesical angle have diminished as our understanding of dynamic bladder physiology has increased." Dr. Wall's comment and emphasis on newer techniques such as cystometrography is provocative.

The presentation of sexual assault and rape in chapter 20 is only lacking information on other physical and emotional assaults on women.

Dr. John Steege presents a good combination of physiologic understanding and common sense management of sexual function and dysfunction in chapter 21.

The detailed discussion of contraception in chapter 22 needs information about oral contraceptives for older women.

The concluding section on Gynecologic Oncology is the highlight of the book, as one might expect from Dr. Clarke-Pearson. Dr. John Soper's chapter from the vast experience of Duke University Medical Center's Gestational Trophoblastic Center is impressive.

Except for the minor recommendations above, this is a complete and thorough introductory book to clinical gynecology. Additional chapters on ethics (the only mention of this was in relation to birth control pills for minors) and on trends and directions of clinical gynecology would be a bonus.

Dr. Clarke-Pearson and his colleagues are to be congratulated for their efforts in continuing and improving *Green's Gynecology.*

Books, Received and Briefly Noted

Received by Edward C. Halperin, M.D., Book Review Editor

Cesarman, Eduardo. *The Four Diastoles: A Cardiac Cycle Model.* Mexico City, Mexico, 1989.

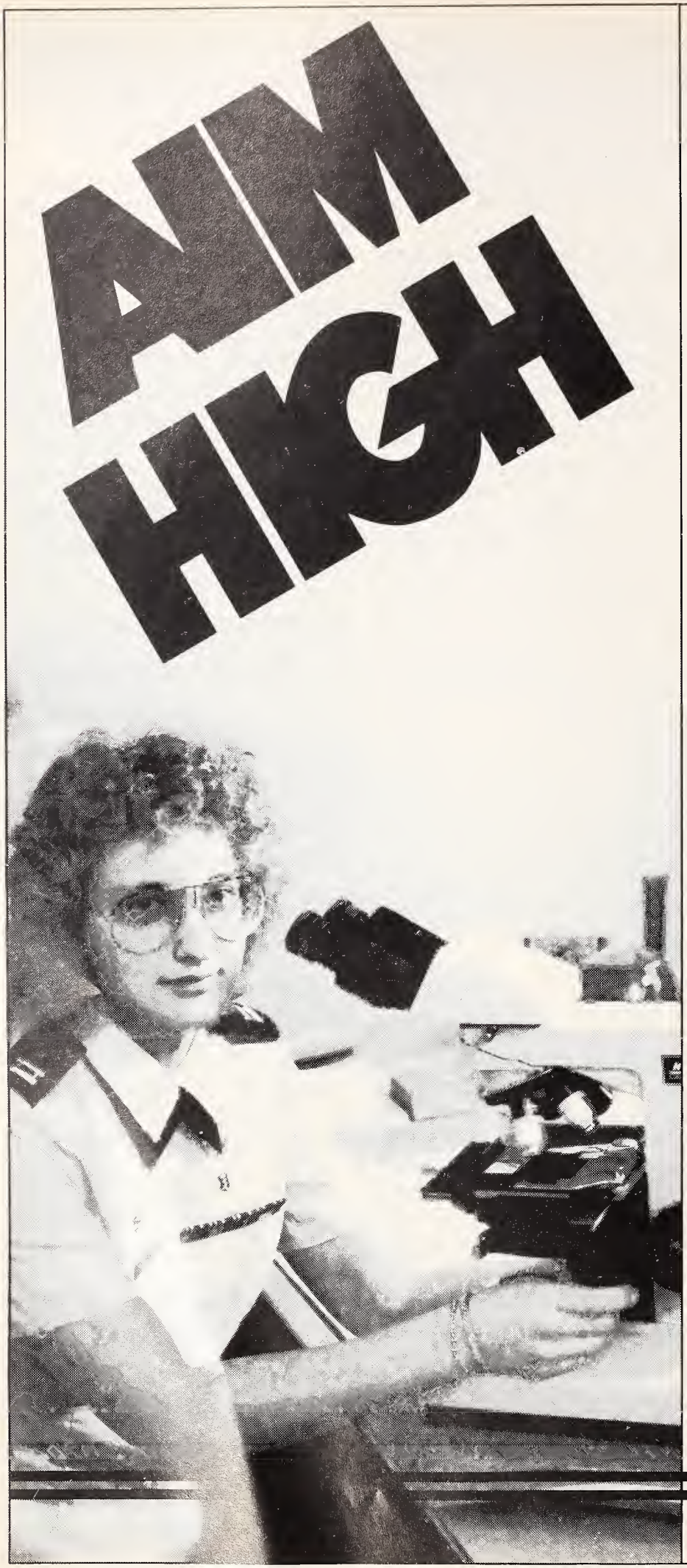
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Health Watch

VOLUME 52 / NUMBER 4 / APRIL 1991

Adolescent Pregnancy

THE FACTS



Researchers say that more than one million young American women under the age of 20 become pregnant unintentionally, out-of-wedlock each year. Most have reasons, mistaken ones, for believing that it can't happen to them. Ignorance concerning how one gets pregnant and how to prevent it are the main contributors to this problem. These unplanned pregnancies often create problems for the young mother and child, threatening both their physical and their emotional health. Below are some of the risks and consequences of teenage pregnancy:

North Carolina Medical Society, PO Box 27167, Raleigh 27611.

Health Risks To Teenage Mothers

- The death rate from pregnancy complications is much higher among girls who give birth under age 15 than among older mothers.
- The teenage mother is more likely to be under-nourished and suffer premature or prolonged labor.
- During the first three months of pregnancy, seven out of ten pregnant teenagers do not see a doctor or go to a clinic.
- Poor eating habits, smoking, drinking alcohol and taking drugs increase the risk of having a baby with health problems.

Health Risks To Babies

The baby growing inside a mother is in a most dependent, and often risky, place. Low birthweight is the most immediate health problem. Babies born to teenagers often are born too small, too soon. Low-birthweight babies may have:

- Immature organ systems (brain, lungs, heart).
- Difficulty controlling body temperature and blood sugar levels.
- Mental retardation.
- A risk of dying in early infancy that is much higher than among normal weight babies (5-1/2 pounds or more).

Consequences of Teenage Pregnancy

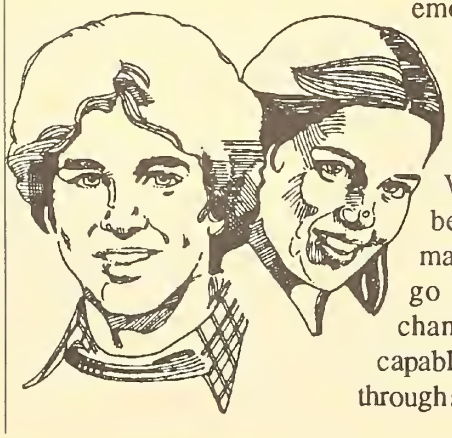
The future does not often hold great promise for a teenage mother and her child.

- Two out of three pregnant teenagers drop out of school.
- With her education cut short, the teenage mother may lack job skills. The income of teen mothers is half that of those who first gave birth in their 20s. The teenage mother may become financially dependent on her family or on welfare.
- Teenage marriages have a much greater chance of ending in divorce.

Adolescence and Sexuality

Perhaps there is no area more intensely personal to adolescents than their own sexuality. Parents, teachers and others often have a difficult time discussing sexuality sensitively and sensibly with adolescents. Thus, most young people accept the information they get from their peers and the media about sex. Often this information is quite incomplete or distorted. So adolescents are left to experiment and find out for themselves. The result of this experimentation can and does lead to unwanted pregnancies.

Everybody is a sexual person. Probably everybody has or will have hopes, fantasies, sensations, disappointments and confusions about sex. Adolescents are no different; it is just that this is the time of life when their physical and emotional developments are so dramatic that confusions and conflicts about sex are at their highest.



With the onset of puberty—the time when male and female bodies go through physical changes that make them capable of producing a child through sexual intercourse—the sexual urge increases greatly. It may be expressed in:

- Curiosity about sex. Adolescents will seek more detailed information from friends, books, magazines, etc.
- Experimentation with members of the same or opposite sex.
- Inner conflicts where the desire for sexual contact is opposed by fears of infection, inadequacy, disapproval, pregnancy, etc.
- Masturbation, which is common and entirely normal. It may, however, arouse some guilt or anxiety feelings.
- Romance and love. Sexual feelings are often tied to emotional involvement in later adolescence.
- Sublimation/suppression. Some teens divert sexual energy to an intense interest in hobbies: model-building, sports, music, etc. Denial of sexual urges can show up as phobias or other mental problems later.

Some teens may feel pressured by their peers to engage in sexual activities even when they don't want to. They need support and love from their parents or some adult they are comfortable with to help them make up their own minds.

How Parents Can Help

Parents can begin the process of helping their teenages by exploring their own values and attitudes. How do they feel about sexuality? How do they feel about today's attitudes versus their own upbringing? What rules do they wish to make for their teenagers?

Parents need to help their teenages realize that they do have a right to say no to sex. It is the individual's decision whether he or she is ready for a sexual relationship.

Parents of adolescents should encourage frank and open discussions about:

- Peer pressures to have sex—Adolescents need support and love to help them make up their own minds. Parents should stress the importance of emotional maturity and genuine attachment.
- Venereal diseases/AIDS—Syphilis, gonorrhea and genital herpes have reached epidemic levels and the threat of contracting AIDS adds a whole new dimension to consider about becoming sexually active.
- Contraception and pregnancy—Most sexually active teenagers use no contraceptives. Parents should help their children realize that both sexes must take responsibility for preventing pregnancy.

- Dating and overnight visits—Rules, limits and penalties should be agreed upon by parents and teenagers together.

Contraception/Birth Control

In sex, as in everything else, the basic obligation for people of any age is to determine what is responsible behavior. That certainly includes taking steps to avoid unintended pregnancy. The usual way to keep an egg and sperm from meeting is to use birth control (contraception) during sex.

There are many methods of contraception available. In selecting one a person should consider convenience, cost and effectiveness. Methods of birth control available include:

- Birth control pills that must be taken by the woman every day. These pills contain hormones that prevent conception by stopping the egg from being released or by changing the lining of the uterus so the fertilized egg can't attach.

- An intrauterine device that is inserted into the uterus by a physician. This device, it is believed, causes chemical changes in the uterus which prevent the fertilized eggs from lodging in the uterus.

- A diaphragm which is a thin rubber cup that a woman inserts into her vagina. It blocks the opening to the uterus preventing sperm from entering. A cream or jelly is used inside the cup to kill sperm.

- Condoms—a rubber sheath that fits over the man's erect penis to prevent sperm from entering the vagina.

- Chemical barriers—sperm-killing foam, cream, tablet or suppository is inserted into the vagina before intercourse.

Beware of **ineffective** methods of birth control. These include 1) withdrawal—where the man attempts to withdraw his penis before sperm are released; 2) douching—fast moving sperm may already be in the uterus by the time the vagina is washed (douching may actually push sperm into the uterus); and 3) makeshift condoms—which easily slip, break or tear.

Before choosing a contraceptive you should discuss the advantages, disadvantages and possible health risks with your physician or family planning counselor.

Help

Adolescents and their parents can receive help and information from many sources. County health departments often list or sponsor programs that offer information on pregnancy and contraception. Many communities have family planning agencies that offer counseling, birth control information and related medical services. Your family physician can provide you with the help you need or refer you to other sources. To get in touch with these sources or others look in the yellow pages under Family Planning, or ask your physician or guidance counselor for a referral. Services are available to young men as well as young women. ❑



1991

May, June:
Teenage Pregnancy/Infant Mortality

July, August, September:
Nutrition

October, November, December:
Medicare

Conjoint Report to the North Carolina Medical Society and the North Carolina Commission for Health Services

Ronald H. Levine, M.D., M.P.H.

Infant Mortality

To begin on a bright note, I am pleased to report that North Carolina's infant mortality rate for 1989 declined to 11.5 deaths per 1,000 live births. This represents a reversal in our two-year climb to the unenviable position of having the highest infant mortality rate in the nation. While one year's worth of data does not a trend make, we believe that a number of activities that have been initiated or expanded during the past year have favorably impacted our infant mortality rate.

The Baby Love-Medical Assistance Program was expanded to provide improved access to health care and support services for pregnant women with family incomes up to 185% of the federal poverty level. We recently studied over 21,000 births to assess the impact of this activity on the utilization of maternal and child health services as well as on the birth outcomes of Medicaid women. Controlling for risk factors and source of prenatal care, it was found that women receiving these maternity care coordination services from their local health departments were 17% less likely to deliver an infant under 2500 grams, 67% less likely to deliver an infant under 1500 grams, and 30% less likely to experience an infant death. Moreover, they were much more likely to have had a postpartum family planning exam. The success of this program, and the knowledge that post-neonatal deaths contribute significantly to our infant mortality problem, has led us to pursue a child care coordination program, also reimbursable under Medicaid, to help get babies and children at risk into the doctor's office for necessary health supervision.

In an effort to ensure continued availability of prenatal and delivery services in medically underserved areas of the state, the General Assembly appropriated an additional $300,000 for the Rural Obstetrical Care Incentive Fund. This program helps to defray the cost of annual medical liability premiums for family physicians and obstetricians in underserved areas. With this increase, it is estimated that an additional 66 obstetrical providers will be able to participate in the program.

Over the past several years we have become convinced that the supplemental food program for low-income pregnant women and infants (WIC program) was a very positive factor in saving lives and enhancing pregnancy outcome. North Carolina was one of five states included in this year's congressionally mandated WIC/Medicaid Cost Benefit Study. The study results establish clearly that Medicaid-eligible women who participate in this program during pregnancy are likely to have more prenatal visits than other low-income women who do not participate in WIC. For every dollar spent on prenatal WIC participants eligible for Medicaid there was an associated savings in Medicaid cost of over $3.

Forty-fifth in infant mortality is, of course, nothing to be proud of and it is becoming increasingly clear that the battle will never be won without greater involvement of the entire community. The Commission on Reduction of Infant Mortality appointed by Governor Martin this past December has as one of its central missions the building of a statewide commitment to infant mortality and prematurity reduction. The 29-member commission, chaired by Dean Stuart Bondurant, has been instrumental in enlisting support from business, religious and civic leaders as well as public and private health care agencies. The Commission is energetically and successfully engaged in securing private contributions of funds for innovative and creative programs and services designed to ensure healthier babies who will thrive and grow to be the productive, successful citizens our state requires.

Steps have recently been taken to eliminate childhood lead exposure, a hazard now known to adversely affect brain functioning, even at relatively low levels. Recognizing lead poisoning as an unnecessary, preventable tragedy, the North Carolina General Assembly ratified legislation requiring all laboratories to

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Dr. Levine is the North Carolina State Health Director. He delivered this report at the North Carolina Medical Society Annual Session, November 1990.

report elevated blood lead levels in children under six years of age to our childhood lead poisoning prevention program. The law also requires property owners, following investigation by our staff, to remove or render inaccessible identified lead hazards from the environment of children at risk.

AIDS

Although North Carolina is still not a high incidence state for AIDS, we have had more than 1500 cases reported. While, cumulatively, over half of all AIDS cases have been in homosexual or bisexual men, just 37.5% of the cases reported in 1990 have been in this population. Meanwhile, cases among injecting drug users have risen dramatically. This group now accounts for 23% of cases cumulatively and over 30% in 1990. AIDS is increasingly affecting our black citizens. Although only 22% of the population is black, in each of the last three years over 50% of the newly reported AIDS cases have been in people of color.

We have been gratified to see the advent of several effective modes of therapy for HIV infected persons but have, unfortunately, been unable to make these therapies available to patients lacking the personal means to purchase them. It is our hope that the general assembly will provide funding sufficient to initiate at least one major pilot program for periodic CD-4 testing and early intervention with therapeutic agents.

STDs

A related issue of concern has been the rising rates of sexually transmitted diseases (STDs). While even one case of congenital syphilis is unacceptable, North Carolina is in the midst of a tragic and unprecedented surge in cases. During the first ten months of 1990, 28 cases of congenital syphilis have been reported. Ten of these were stillborn or lived only one day. Only four years ago, we did not have a single case of congenital syphilis in North Carolina. This is a tragedy that should not happen in this era of prenatal care, serologic tests and antibiotic treatment. Also of great concern is the fact that resistant gonorrhea has now become hyperendemic in 34 counties. Thus far in 1990, there have already been well over 1,000 cases reported. Increases in STDs are often experienced in inverse proportion to the field staff that are available to interview patients and investigate their sex contacts. North Carolina is no exception. Our federal field staff declined from 22 in 1985 to seven in 1990. In addition, nearly 90% of the patients we have interviewed are involved in drug use of one kind or another. Sex for drugs is a common occurrence among the female population that are interviewed in North Carolina. A particularly important reason for bringing these sexually transmitted diseases under control is that the presence of associated lesions substantially increases HIV virus transmission rates during sexual contact.

Environmental Health

I would now like to concentrate for the remainder of my report on a topic which has received a great deal of media coverage during the past year—the implications for our citizens' health of potential environmental insults with particular attention to hazardous waste. Industries in North Carolina generate over 140 million pounds of these ignitable, explosive, corrosive and/or toxic materials annually, despite the fact that we have one of the most effective pollution prevention consultation programs available to industry in the nation. While substantial reductions in the amounts of waste generated can be, are, and should be achieved, we must face the fact that chemical treatment, metals recovery, high temperature incineration and disposal or residual ash will always be necessary components of an integrated approach to the safe management of the hazardous waste by-products of our society. We can no longer deposit or bury these substances in the back forty with an out-of-sight, out-of-mind attitude, only to have them leach into our groundwater supplies. We can no longer discharge them into our surface waters and allow them to contaminate our downstream drinking water supplies or the sediments of our rivers, streams, and estuaries where they become available for uptake into the food chain. We can no longer dump these wastes at sea or send them to distant international shores for disposal.

The Environmental Protection Agency (EPA) has concluded that high temperature incineration is *the* most efficient and safe method to deal with a large percentage of the organic hazardous waste generated in this country. Why is the safety of this method so often a matter of debate and even alarm? In theory, high temperature combustion of organic chemicals results in destruction of chemicals down to the basic elements carbon dioxide and water vapor. In practice, this has not always been the case. EPA has identified three potential unwanted emissions related to incineration which must be addressed in a state-of-the-art facility. Those are: heavy metals; products of incomplete combustion, such as doxins; and irritating acidic aerosols and vapors. Prior to November 8, 1989, EPA did not require state-of-the-art incinerator design or the use of air pollution control equipment. In addition, the recent past has seen insufficient emphasis placed on environmental monitoring, worker education and training, and occupational safety and health. Combustion of hazardous waste under such a scenario has probably resulted in excessive emissions of toxic air pollutants and unacceptable risks to the public and workers.

For example, many of you have heard or read about the hazardous waste incinerator in Caldwell County. This was a municipal garbage incinerator which was "grandfathered in" under federal law to burn hazardous waste until 1989 when it had to obtain a much more stringent permit or close. The facility was not designed to burn hazardous waste, and it did not have any air pollution control equipment during most of the period it operated.

State public health physicians concluded early in 1987 that respiratory complaints in residents living near the

incinerator were plausibly associated with exposure to uncontrolled air emissions. Our department, in conjunction with Duke University Medical Center, designed an epidemiologic study to evaluate the respiratory complaints of these residents. This was one part of a comprehensive study which also included environmental and biological monitoring, as well as an evaluation of the work site and potential risks to workers within the plant itself. Unfortunately, the respiratory effect study could not be completed because the majority of residents, already angry at EPA and the state for taking so long to close out this operation, refused to participate. It is now believed that uncontrolled emissions of chlorides from the facility likely exacerbated existing respiratory illness or initiated new illness in the form of reactive airways disease in some residents. In addition, several workers at the facility have developed neurological illness which may be related to acute and/or chronic overexposure to solvents and other wastes handled at the facility.

Our staff was also frustrated by their inability to obtain from an area physician clinical records on individuals reportedly suffering from worksite-associated symptoms or with respiratory illness possibly produced by exposure to emissions from the facility. Every practicing physician should be aware of a relatively new law which removes any risk of civil and criminal liability directed toward attending physicians who share confidential medical information with a public health physician for the purpose of investigating a matter of public health concern.

The state has been undertaking a number of measures since 1987 to prevent the recurrence of events such as were experienced at the now defunct Caldwell County incinerator. At my request, the North Carolina Academy of Sciences appointed an expert panel of epidemiologists, toxicologists, physicians, industrial hygienists, and others to derive health-based standards for approximately 100 air pollutants of concern. The panel derived acceptable ambient levels, or AALs, which would be protective of public health, and these were recently adopted by the North Carolina Environmental Management Commission. They will be applied to all incinerators permitted in this state to release pollutants into the atmosphere, including hospital, medical and commercial waste incinerators.

Another recently enacted safety precaution will require that all commercial hazardous waste facilities permitted in North Carolina must have a resident state inspector on site during operation. These inspectors will have the knowledge and training necessary to monitor the daily operation of the facility and will have the authority to shut the facility down if necessary. Finally, our department has requested additional staff in those divisions overseeing the regulation of hazardous waste facilities.

You are very much aware that physicians generate significant amounts of hazardous waste, medical waste, even low level radioactive waste: from paper towels and patient drapes, plastic syringes and polyvinyl chloride IV bags, silver-impregnated x-ray film, mercury thermometers, and even diagnostic radionuclides. The medical community has a great stake in seeing to it that these materials are disposed of in a safe manner.

Because of failure to deal successfully with this issue in the past, North Carolina now has approximately 900 Superfund sites including 150 toxic pesticide dumps. One of those recently discovered contained enough arsenic on the soil surface to poison an entire city. There are approximately 1,375 leaking underground fuel tanks and new ones are being discovered at a rate of approximately 60 per month. One gallon of leaked gasoline or fuel oil can render a million gallons of groundwater unsuitable for human consumption.

As the Hazardous Waste Management Commission and Low Level Radioactive Waste Authority attempt to identify appropriate sites suitable for locating treatment and disposal facilities, I would ask that each of you with specific or general concerns open a dialogue involving your component society and our department to share and evaluate those concerns. I commit myself and my staff to see that your concerns are addressed in a comprehensive and scientific manner. We must meet the challenge of managing our growing hazardous waste and low level radioactive waste burdens in a safe and effective manner. We have no other choice. As physicians and respected members of our communities, we must become part of the solution.

"Do we as physicians have a stake or even an interest in biodiversity? Fully one-third of the pharmaceuticals used today were derived from the vast biodiversity found on this planet.... The next time you write a prescription, think about its derivation and the important links we have, as citizens and physicians, with our environment."

Of course, hazardous waste and low level radioactive waste disposal are just two issues which illustrate the growing link between the quality of our environment and the quality of our health. Physicians have developed an exemplary attitude of social responsibility toward responsible use of biotechnology and genetic engineering. With the same enthusiasm and resolve, we must play a role, however small, in efforts to prevent global warming and ozone depletion, to abate smog and acid rain, and to protect biodiversity. Your watchful eye for a melanoma may not only make the difference between diagnosis at stage I versus diagnosis at stage III, saving a life, but your early identification of that case will be entered into our rapidly developing state cancer registry, which has already demonstrated the increasing incidence of

this largely preventable malignancy. Analysis and publication of these statistics, in turn, could help to bring about more stringent international regulation of chlorofluorocarbons and other chemicals which cause ozone depletion.

The abatement of acid rain will help protect the environment, biodiversity, and human health. Reduction of acid aerosols and smog in our environment will result in lower rates of respiratory illness in our state's citizens. Reducing the acidity of precipitation will reduce the bioavailability of toxic metals such as mercury and lead by reducing their leaching from our soils and water pipes.

Do we as physicians have a stake or even an interest in biodiversity? Fully one-third of the pharmaceuticals used today were derived from the vast biodiversity found on this planet—digitalis, reserpine, vincristine and vinblastine, ipecac, aspirin, colchicine, quinine and quinidine, ephedrine, curare, numerous narcotics, and many antibiotics. Even our third-generation cephalosporins had their beginning with the isolation of keflex from a fungus found in sewage off the coast of Sardinia. Unbridled tropical deforestation promises to accelerate global warming and deprive tomorrow's practitioners of the parent compounds for new classes of antibiotics, antiparasitics and antifungals, antihypertensive and anti-inflammatory medications, and new chemotherapeutic agents for cancer and chronic disease. The next time you write a prescription, think about its derivation and the important links we have, as citizens and physicians, with our environment.

What other profession combines a grounding in the basic sciences, and appreciation of ecology and particularly the concept of equilibrium, an ethos that combines both prevention and remediation, and finally, but not least significantly, the continuing respect of the people, of Joe Citizen? I know we can't single-handedly prevent the loss of two-thirds of Hyde County to rising oceanic levels, or even closer to home, the geometric increase in the incidence of malignant melanoma. What we as physicians can do and, I feel certain, will do is to take an increasing interest in the matter of environmental degradation, seek and analyze the available information on issues of scientific and emotional dispute, and enter the fray on the side of what we believe is necessary and appropriate to protect the public health and the environment of this beautiful state. The physicians of this state have not let North Carolina down in the past. They will not do it now. ❑



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The Red Imported Fire Ant (*Solenopsis invicta*)

A Problem in North Carolina

William A. Burke, M.D.

The red imported fire ant, *Solenopsis invicta*, has become a major medical and economic problem in the southeast and south-central United States, including North Carolina, over the last several decades. The area has several native species of fire ants as well, but these do not readily attack humans and are only a minor nuisance. The other "imported" species of fire ant, the black imported fire ant (*Solenopsis richteri*), is found only in an area of central Mississippi and Alabama and is not a concern here in North Carolina.[1,2]

Historical Perspective

The red imported fire ant was first noted in Mobile, Alabama early in this century. It was apparently imported here via Brazilian ant-infested soil used as ship's ballast and then dumped on the shores of Mobile Bay. With no natural enemies in the area, the prolific ant spread locally throughout southern Mississippi and Alabama. Through shipments of camellias and azaleas containing ant-infested soil, the nursery industry appears to be at least partly responsible for the rapid spread of the fire ant throughout the southern states in the 1940s and 1950s.[3]

The ant now appears to be limited somewhat in its spread by environmental factors, such as the dry, arid environment of the southwestern United States and—because the ant cannot survive cold winters[4]—the 10°F winter minimum temperature isotherm to the north. More cold-tolerant hybrids, however, have recently been reported which may allow further extension of the northern range of the ant.[5]

Concern about future spread of the ant (especially to the West Coast) has led the U.S. Department of Agriculture to require that all plants, sod, soil, logs and hay shipped from infested areas be treated and certified free from fire ants.[6] Although here in the continental United States we consider the pest to be "imported," the fire ant was apparently "exported" via an oil tanker from Houston, Texas to Puerto Rico where it became established around 1980.[3] The ant now is well established throughout most of the southeast and south-central United States (figure 1).

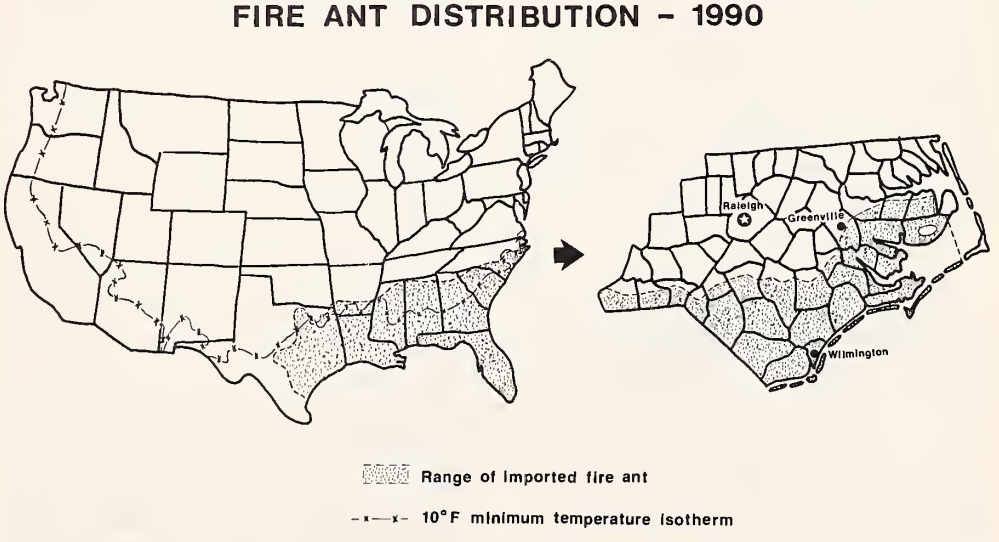


Figure 1. Distribution of the red imported fire ant in the United States and eastern North Carolina in 1990 (Adapted from Imported Fire Ant Quarantine Maps, from the U.S. Department of Agriculture and the NC Department of Agriculture, and from the 1990 U.S. Department of Agriculture Plant Hardiness Map.)

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Biology of the Fire Ant

Solenopsis invicta, a member of the arthropod order Hymenoptera, is a relatively small (3-6mm) ant (figure 2) with a chitinous mandible that it uses to grasp prey and, at the distal abdominal segment, a stinger with which it envenomates and incapacitates its victim. The ant feeds on small insects, ticks, arthropod larvae, worms and carrion. As an omnivore, the ant also feeds on plants, including crops.[7]

The ant mound (figure 3) is usually 1-1 $^1/_2$ feet in diameter and height and can extend several feet below the surface. It contains an intricate reticulum of tunnels and, unlike other ant mounds, has no conspicuous entrances on the mound surface. The ants come and go from the mound via lateral tunnels radiating away from the mound. A mature colony may contain 100,000 to 200,000 or more worker ants, and thickly infested land may contain up to 250 mounds per acre.[7]

The ant has a phenomenal reproductive capacity. Although many mounds have only a single queen, more and more mounds now appear to have multiple (typically 20 to 60 but sometimes 300 or more) queens.[7] Each queen normally lives for several years and produces hundreds to thousands of eggs in multiple layings.[2] A newly-matured queen grows wings during warm weather and leaves the mound to be fertilized by the winged male drone. After landing, a new colony is formed when the eggs laid by the new queen hatch into workers. Later nurses and foragers are added to the "family" and new queens are produced.[8]



Figure 2. The red imported fire ant, *Solenopsis invicta*.

Medical Implications of the Fire Ant Problem

The name "fire" ant comes from the immediate "splash of grease" burning sensation which occurs from multiple simultaneous stings. The victim is usually a person or animal who has unwarily stepped on a mound. When the mound is disturbed, there is a pheromone-induced mass exodus of ants to defend the colony while nurse ants rapidly move the queen deeper into the mound to protect her.[7]

The ants bite their victim with chitinous mandibles and then sting multiple times in an arc around the bite site. The venom contains dialkylpiperidines which cause histamine release from mast cells, leading to a local early phase reaction at the bite site consisting of pain and itching associated with a wheal and flare response.[9] This reaction usually resolves within 30 to 60 minutes.

Unlike other ant venoms, red imported fire ant venom causes tissue necrosis, producing a vesicle that progresses within 24 hours to a sterile pustule at each sting site. The typical patient will present with numerous pustules—many in an arc (figure 4). Although no treatment has been shown to be effective in preventing pustule formation,[10-12] symptomatic treatment with antihistamines or menthol containing preparations (e.g., Sarna®, PrameGel®) may be worthwhile. Although multiple anecdotal remedies have been advocated for localized bite reactions (including dilute chlorine bleach, paste of meat tenderizer, and topical aluminum sulfate), the rare controlled study has not provided evidence of benefit.[13-14] Prophylactic use of a topical antibiotic (e.g. Polysporin® spray) may be useful in preventing secondary infection.

Late phase reactions present as larger erythematous plaques (often annular) which arise relatively rapidly around the sting sites and may last several days. Symptomatic treatment as above is generally used for these extremely pruritic lesions. Topical corticosteroids may also be beneficial, and systemic corticosteroids may be indicated in severe cases.

Like other members of the Hymenoptera, the red imported fire ant may also cause generalized hypersensitivity reaction to allergens in the small protein fraction of the venom. These range from urticaria and angioedema to life-threatening anaphylaxis.[15-18] A recent physician survey of the endemic area of the United States identified 32 deaths due to anaphylactic reactions from fire ants.[19] Death due to massive envenomation must be rare. Diaz et al. recently reported a case where fire ants had invaded a home in Florida and attacked an aged sleeping woman who sustained an estimated 10,000 stings, yet there were no systemic toxic reactions.[20] Neurologic sequelae including seizures and neuropathies have been reported following fire ant stings.[21] At our center, we have also seen an anaphylactoid reaction (with urticaria, angioedema and syncope) following fire ant stings in a patient with urticaria pigmentosa, a cutaneous form of mastocytosis.

Multiple distinct allergens have been identified in the minute protein fraction of fire ant venom.[22,23] *Solenopsis invicta* venom not only appears to have extensive cross-reactivity with other fire ant species,[24] but one of the allergens can cross-react with honeybee and wasp venoms.[25] Because of this, persons sensitive to these other hymenoptera may have a serious reaction even to an initial fire ant sting.

For patients with IgE-mediated hypersensitivity reactions, a portable anaphylaxis kit and medical identification card/bracelet/necklace are advisable. Immunotherapy using whole body fire ant extract may also be beneficial.[26,27] More recent breakthroughs in isolating purified venom may lead to eventual government approval for its use in immunotherapy.



Figure 3. Mound of the red imported fire ant.

Social, Economic and Environmental Implications

The fire ant has had a major impact on the lives of people who live in infested areas. Simple everyday activities such as playing in the park, having a picnic, camping, walking along a roadside, sitting on the ground or even walking barefoot become events requiring one's full attention. Although most fire ant mounds are quite noticeable, many are not, especially in mowed areas where the ants learn to produce mounds lower than the height at which the lawn is typically mowed. I have personally stepped into a mound completely covered by autumn leaves. Also, the lateral openings to the fire ant mound may be as far as 132 feet away from the mound, although most occur within several yards.[7] Parental concern over children playing unattended outdoors is also readily apparent in infested areas. In addition, fire ants occasionally are found indoors, especially during wet weather.[7] Although most people have learned to co-exist with the fire ants without becoming phobic, those who have experienced a severe anaphylactic reaction often live with great fear and may avoid outdoor activities altogether.

Fire ants also have a major impact on the farmer. Not only are crops such as okra, potatoes, soybeans, corn, eggplant, beans and citrus damaged by the fire ants, but their mounds can also damage farm equipment such as mowers or combines. It is common to find soybean and corn fields supporting 100 to 125 mounds/hectare, and citrus groves in Florida often are very heavily infested (> 200 mounds/hectare).[28] The ants can be a major problem to livestock and can change valuable pastures and farmland into relatively unusable and unsalable real estate. Ants may invade poultry houses to feed on the large number of arthropods there, at times causing the poultry to trample each other resulting in economic losses.

The nursery and sod industry has also been affected by the fire ant. Quar-

antine procedures and pesticides are quite costly, and there are severe restrictions on shipments to fire ant-free areas such as California.

Since they can destroy underground cable, fire ants have become a problem to power and telephone companies. They can even affect construction practices, as evidenced by the special design components of the U.S. Department of Energy Super Collider project in an infested area of Texas. Wildlife may also be affected by fire ants. Ground nesting birds such as quail may be diminished in population in fire ant-infested areas, and mouse and lizard populations may also be decreased. Predation on insects may affect the local food web.[7]

It is rare to find a person in an infested area that has not had individual experience with the fire ant. It has been estimated that 29% to 35% (up to 55% in children) of the population may be stung one or more times each year in infested areas,[29,30] with 0.61% of these experiencing systemic anaphylaxis.[31] Although long considered to be a rural problem, fire ants are also a major problem in cities.[29]

Control of the Fire Ant

In the past, multiple pesticides were used in widely broadcast applications to control fire ants. This practice proved to have serious deleterious effects on the environment including wildlife, livestock and even humans. Heptachlor was used extensively in the late 1950s until the mortality of wildlife and pressures from environmentalists led the federal Food and Drug Administration (FDA) to reduce residue tolerances for heptachlor to zero.[3] Mirex bait replaced heptachlor in the 1960s and 1970s until it proved to be carcinogenic and cause birth defects. Today, Amdro® (American Cyanimide) bait is used most often for non-agricultural broadcast application because it degrades rapidly and does not accumulate in the environment. Diazanon is used frequently for individual mound treatments and chlorpyrifos is commonly used in the nursery industry. A relatively new product, Logic® (PBI, Gordon Corp.), is also used for broadcast application.[6] This bait pesticide is actually a juvenile hormone which, when fed to ant larvae, disrupts the morphogenesis to adulthood. With the resultant diminishing supply of workers, the colony fails. Owing to the extent of the problem in this country, extensive investigation continues for more improved pesticides and biologic controls including pheromonal manipulation, natural predators and ant diseases.



Figure 4. Multiple imported fire ant stings which occurred after stepping on an ant mound. As the ant grasps with its chitinous mouthparts, it stings repeatedly in an arc around the bite site leading to an arciform arrangement of some of the lesions.

The Imported Fire Ant in North Carolina

The first report of red imported fire ant infestation in North Carolina was in Mecklenburg County in 1953, during a four-year plant nursery survey of all southern states. This local infestation was apparently short-lived, perhaps due to cold winter temperatures, as the Charlotte area is not infested today. The spread of fire ants up the coast of eastern North Carolina was likely due to encroachment of the pests from neighboring South Carolina. The sod and nursery industry may also have been partly responsible for this spread prior to quarantine restrictions. Early infestations into new areas often seem to appear along roadsides. One of the earliest sites of heavy infestation on the northern shore of the Pamlico River was at the ferry landing near Bayview, NC, suggesting vehicular spread. The pest is now found in at least 27 counties in southeastern and eastern North Carolina (figure 1).

Farming losses, especially in the soybean industry, with lower crop yields from infested fields have been studied in the state. Loss occurs not only from decreased seed yield, but also from mounds interfering with harvesters.[32,33]

Road damage is another major problem in infested areas in coastal North Carolina.[28] Soil excavation under the roads by fire ants weakens the road foundation leading to eventual breakage and collapse of the road surface.

In nearby South Carolina, a survey of 1,012 physicians (50.7% response rate) reported 12,127 cases of fire ant stings in which the victims sought the advise of a physician during 1986.[34] Of these, 1,726 cases were seen in the physicians' office with an additional 474 either treated in an emergency room or hospitalized. Eleven percent of the total cases had systemic allergic reactions. Although no deaths from fire ant stings were reported in South Carolina during this year, there were 13 "near death" cases. In 1984, there was a death reported in Horry County (Myrtle Beach Area), attributed to fire ant stings.[35] A recent survey[36] of physicians from the

endemic areas showed that 391 patients were treated annually in North Carolina, with five life-threatening reactions per year. Another physician survey[19] did not identify any fatalities due to the fire ant in North Carolina, and there have been no definite fire ant deaths reported to the NC Department of Environment, Health and Natural Resources (personal communication). However, in Brunswick County in 1979, a fatality due to anaphylaxis was reported in a newspaper.[37]

Although it is impossible to predict accurately the cost for a fire ant eradication program in North Carolina, in 1986 it was estimated that for the state of South Carolina (where the problem is statewide), eradication would cost approximately $140 million the first year with annual maintenance costs of $70 million.[35]

Environmental impact studies of such a major eradication effort would likely preclude its implementation. In addition, if efforts ceased, rapid reinfestation would likely occur.

Conflicts between the red imported fire ant and North Carolinians will likely be a continuing problem for years and years to come. The North Carolina Department of Agriculture and your county extension agent can be helpful in recommending control measures for infested areas. In addition to further study into safer ant-control measures and selective immunotherapy of sensitized individuals, future research efforts need also to be directed toward the methodology to "peacefully co-exist" with these irritating, and sometimes deadly, pests. ❑

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Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatic. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

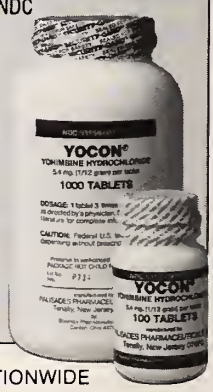
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

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Board of Medical Examiners

Retiring Physicians

On August 2, 1990, the Board of Medical Examiners unanimously adopted a motion to recommend that the North Carolina Medical Society consider as appropriate the establishment of support groups in various parts of the state for retiring and/or retired physicians.

The Board passed the following resolutions.

1 Retiring Physician List

On August 2,1990, the Board unanimously passed a motion adopting the following resolution regarding retiring physicians licensed in North Carolina:

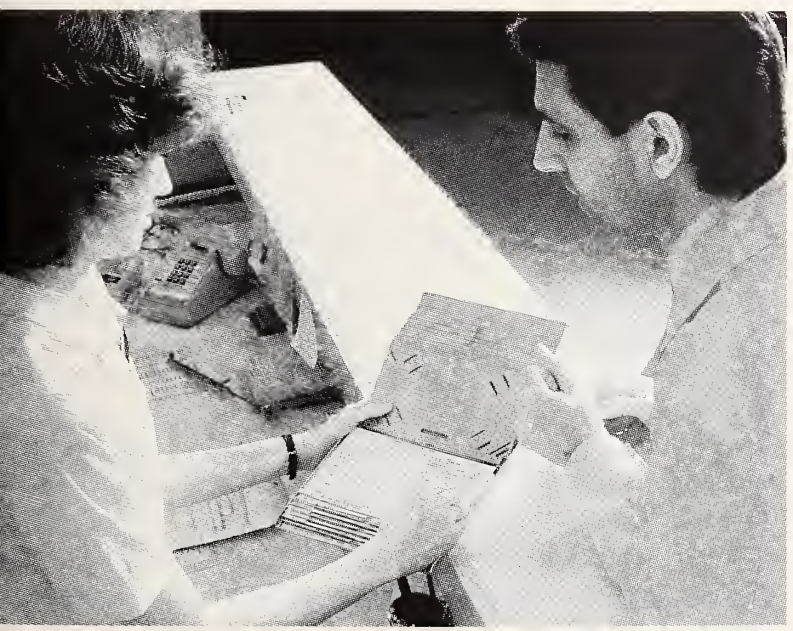
Resolved that the Board of Medical Examiners of the State of North Carolina maintain a retirement list of licensees no longer active in the practice of medicine and make notice of such as is possible in the Board's Bulletin and the *North Carolina Medical Journal*.

2 Retirement Letter

On August 2,1990, the board unanimously adopted a recommendation that the current procedure of awaiting information, either directly or indirectly, regarding physician's retirement be continued as at present and, at that time, an acknowledgment letter be issued that the Board would like to place the physician's name on the list of retired physicians; and advising the physician that retirement must be complete and in addition to the cessation of practice, includes the cessation of writing prescriptions. The letter would ask if the physician would like the Board of Medical Examiners of the State of North Carolina to issue a press release regarding his retirement to be sent to the newspaper, radio, and/or television stations that he would like to receive this notice.

Nicholas E. Stratas, M.D.
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North Carolina Pediatric EMS

Past, Present and Future Challenges

Nicholas Benson, M.D.

Over the last several years, North Carolina citizens have witnessed significant developments in emergency medical services. Specifically, improvements have occurred in the sophistication of the skills of technicians, the personnel available in emergency departments, and the designation of trauma centers. During this evolution, the emergency care of critically ill and injured pediatric patients has steadily advanced, as well. This paper will chronicle some of the most significant of these advancements, in an effort to provide both a historical overview and a present-day accounting. The final portion will develop a series of future challenges for all professionals involved with pediatric emergency medical care.

Trauma is a medical problem that has a tragic influence on persons of all ages in North Carolina.[1] It has a particularly devastating effect on children due to the life-long morbidity that frequently results.[2] Indeed, trauma is the leading cause of mortality nationwide for the pediatric population,[3] and was responsible for the deaths of over 4,000 North Carolinians in 1989.[1]

The American Academy of Pediatrics designated 1990 as the Year of the Child. The Academy wants to bring attention to the need for further education for all health care professionals in dealing with pediatric patients. Nowhere is this need more important or apparent than with emergency medical services. The development of skills and technology over recent years have brought significant maturity to the hospital-based care of critically ill and injured children.[3] However, the care of children in the field by prehospital care providers still remains an area of need. The development of airway skills, emergency fluid resuscitation, body warmth maintenance, and other maneuvers need further emphasis in the care of these patients prior to their arrival at the emergency department.

The Historical Perspective

Traditionally, physicians providing care in emergency rooms were members of the hospital's general medical staff assigned on a rotational basis to take call for emergency patients. Thus, members of the medical staff, regardless of their background or training, were required every so often to provide care for any and all patients who might present to the emergency room. This system was generally borne of necessity, prior to the development of emergency medicine as a separate clinical specialty. Of course, the ability of individual members of the medical staff to provide appropriate emergency care for critically ill and injured children would vary significantly based upon their clinical practices and training.

Over the years, a variety of physicians have committed their time and expertise toward developing prehospital care in their local area. Especially in North Carolina, numerous cardiologists, family physicians, surgeons, and others provided fundamental expertise in medical direction for the early prehospital providers. In some regions of the state, there was a ready availability of such physicians, while in other areas of the state there was an unfortunate lack.

The American College of Emergency Physicians was founded in 1969 and recognized early the need for training and specialization in emergency patient care in order to have a favorable impact on patient outcome. Special attention was paid to highway injuries and cardiac patients. The founding of the College was followed in 1979 by recognition of emergency medicine by the American Board of Medical Specialities, when the American Board of Emergency Medicine was established as a conjoint board. This created a formalized certification process for physicians providing patient care in emergency departments.

One of the major resources in prehospital care in the past has been the volunteers. It is no secret that the foundation of prehospital care in North Carolina rests upon the shoulders of thousands of volunteers who have dedicated themselves to training and providing equipment for patients in the field. This devotion to an unmet need required sacrifices of many long and hard hours. The commitment continues today, and will in the future, in many portions of the state.

From the Department of Emergency Medicine, East Carolina University School of Medicine, Greenville, NC 27858-4354.

Most providers of prehospital care began at the basic life support (BLS) level, which provides basic assessment skills, initial interventions, and cardiopulmonary resuscitation. A few groups of technicians and their physician leaders worked cooperatively to develop providers capable of advanced life support (ALS), which includes all types of invasive therapies. The North Carolina EMS Act of 1973 vested the responsibility for promulgating rules for all prehospital advanced life support care in the state with the Board of Medical Examiners of the State of North Carolina. As BLS grew into ALS, the skills available to technicians for providing care for pediatric patients increased significantly. EMT-Paramedics were trained and certified in endotracheal intubation. Unfortunately, the advanced airway stabilization available to EMT-Intermediates was an esophageal obturator airway (EOA), which was only appropriate to use in patients 15 years of age or older. Some providers denied their ALS technicians the opportunities to do endotracheal intubations or to place intravenous lines on pediatric patients out of fear that these infrequently used skills may cause more harm than good when actually attempted. There was also concern that attempting these interventions might delay the prehospital crew in getting the patient to the nearest medical facility.

In the past, there were considerable logistical problems in transporting patients from one hospital to another. When a patient needed services that were not available from the local facility, the local EMS provider was generally called upon to provide the staff and an ambulance for the transfer to the regional referral center. In the case of critically ill or injured patients, this often presented considerable problems for the provider. Many times, especially when the local provider was not certified at the paramedic level, a nurse or a physician had to accompany the prehospital technicians during the transport.

This utilization of prehospital resources for interfacility transfer obviously resulted in a decreased availability of prehospital resources. Frequently, the ambulance and technicians were tied up for several hours to complete the transport. This led to a direct reduction of available personnel and equipment locally to respond to prehospital needs.

In 1974, national courses were developed, in cooperation with the American Heart Association. Basic Cardiac Life Support and Advanced Cardiac Life Support were taught. Both of these courses contained information that pertained to children and adults in stabilizing patients with acute cardiorespiratory emergencies. The American College of Surgeons developed the Advanced Trauma Life Support course in the late 1970s; unlike the cardiac courses, this course primarily covered adult trauma care. Similarly, the Basic Trauma Life Support course developed in the early 1980s emphasized prehospital care for adults, with little mention of pediatric trauma.

The Present

The emergence of emergency medicine as a new independent medical specialty and the training of emergency physicians as independent practitioners gave a major boost to prehospital care in general and to pediatric emergency medical services in particular. For the first time, physicians were available in emergency departments around the clock who had interest, training, and experience in dealing primarily with emergency medical care for patients of any age. Most hospitals' emergency departments in North Carolina today are staffed by physicians who consider emergency medicine their primary specialty.

In addition to bringing increased expertise in the assessment and stabilization of pediatric emergencies, these physicians are arguably more available and have strong interest in medical direction of prehospital care. While the primary requisite for involvement in prehospital medical care is probably still a willingness on the part of the physician to commit the appropriate time and energies to the cause, emergency physicians have emerged as the most available and frequently the most informed participants. However, there are sill numerous physicians with other specialty training who provide exemplary leadership for prehospital providers.

In the late 1980s, the Society for Pediatric Emergency Medicine and the National Association for EMS Physicians both emerged as significant national physician organizations with interest in pediatric emergency care. Further, both the American Academy of Pediatrics and the American College of Emergency Physicians have developed sections on pediatric emergency medicine.

Over the past decade, there has been a substantial increase in the number of providers of prehospital care in North Carolina who charge patients for their services. In large part, this has been due to decreases in volunteer technicians to staff the ambulances, particularly during normal daytime working hours. In some areas, women are relied upon for daytime coverage; but the increasing prevalence of women with full-time employment has resulted in a direct reduction of this labor pool for prehospital providers.

Due in part to an increased emphasis nationally, more and more emergency medical professionals are examining the care that is given in the prehospital phase in an attempt to determine if this care is truly having the desired positive impact on patient outcome. Rather than looking for skills that we can add to the list of a technician's abilities, professionals are asking what skills are truly needed to assess and stabilize patients to decrease their morbidity and mortality before they are delivered to the emergency department. This is especially necessary in the area of pediatric emergency medical care, where it has long been assumed that skills that were appropriate for adults could easily be transferred and applied to sick and traumatized children. One of the realizations that has emerged in this continued reanalysis is the importance of the airway, especially in pediatric patients. Not only are airway skills emphasized more in prehospital programs, but discussions are occurring over the need for invasive airway stabilization at lower levels of technician certification.

In North Carolina, this increased attention to the needs of prehospital patients has resulted in periodic revisions to the ALS rules as prompted by physicians and other EMS professionals across the state and promoted by the North Carolina Board of Medical Examiners. Included among these are the utilization of automatic and semi-automatic defibrillators, the addition of several medications for EMT-Paramedics, and the implementation of EMT-Advanced Intermediates. The latter category of certification was created to supply expert care primarily for emergency traumatic and cardiac events (with endotracheal intubation, defibrillation, and a handful of medications) in areas without the resources to train to the EMT-Paramedic level. In early 1990, intravenous glucose was added as a skill for EMT-Intermediates; this will have a direct impact on hypoglycemic children.

Many prehospital providers now have separate treatment protocols for dealing with pediatric patients. This includes both ALS and BLS services and an increased recognition of the differences in assessing and stabilizing pediatric patients compared to adult patients.

Today, interhospital transfers are frequently performed by hospital-based teams. Indeed, many hospitals provide their own BLS transport services just for this type of event; when a patient requires ALS care during the transfer, a nurse is generally added to the BLS team. In other situations, nurses or paramedics who are specifically equipped and trained for transfer care are used on a regular basis by a hospital. This team may be supplied by the referring hospital, although generally they are from the receiving hospital. Among other advantages, this helps to bring each community hospital into closer contact with the regional critical care services, by providing a regular team that can be relied upon to conduct transfers.

Additionally, air medical transport services have been developed from Manteo in the Outer Banks to Asheville. Seven different air medical services have been permitted by the Office of Emergency Medical Services (OEMS) to provide helicopter transport. While these programs also do respond directly to the scene of an accident, they are primarily used for interfacility transfers. For these transfers they bring two major advantages to the transfer process. They provide a critical care team that is specifically trained for transports. They also substantially decrease the amount of time that the patient is outside the hospital environment. Their direct route of flight from one point to another and the increase in air speed over ground speed means that the patient will be subjected to the stress of transport for a shorter period of time. Many healthcare professionals still harbor significant anxiety over providing care for critical pediatric patients. These critical care transport services offer relief from this anxiety and help expedite the movement of patients to definitive care services.

National critical care courses have undergone periodic revisions, in order to maintain currency with available clinical knowledge. Advanced Trauma Life Support and Basic Trauma Life Support have both substantially increased their emphasis on pediatric trauma. Pediatric Advanced Life Support (PALS) and Advanced Pediatric Life Support (APLS) are two new courses that have been developed on the national level by the American Academy of Pediatrics and by the American Heart Association, and the American Academy of Pediatrics and the American College of Emergency Physicians, respectively.

As the designation process for trauma centers in North Carolina has progressed in the 1980s, the North Carolina Statewide Trauma Registry has developed into a significant database with an ability to attract major national attention. Now with over 20,000 patients in the Registry, the pediatric subset of these data assumes proportions that have significant research value. Epidemiologic investigations and critical clinical analyses of these data are really just getting underway.

Two centers in the state are currently looking solely at pediatric trauma in terms of who gets injured, where they get injured, how they get injured, and other elements. Both sets of researchers, at Carolinas Medical Center and East Carolina University School of Medicine, are interested in defining the "who, what, where and how" of pediatric trauma in order to develop strategies to prevent such injuries in the future.

Over the past several years, the Centers for Disease Control has funded a variety of EMS for Children grants intended to focus on the development of resources to aid pediatric emergency medical care. These resources may consist of educational offerings, assessment and treatment modalities, and opportunities for integrating regional resources. The University of North Carolina School of Medicine received such a grant.

Obviously, one of the sentinel events in recent years in pediatric emergency care has been the creation of the Hemby Pediatric Trauma Institute at the Charlotte Memorial Hospital. This center is dedicated to committing major resources, to increasing the awareness of pediatric trauma patients' needs, to helping focus resources, and to undertaking major educational efforts of both healthcare professionals and the general public. The Institute brings together a variety of experts from different disciplines to share their abilities and interests.

The Future Challenges

As pediatric emergency care is launched into the 1990s, physician involvement and strong medical direction in all aspects will continue to be key elements. This strong commitment is typified by many physicians across the state. However, there are still some portions of the state that suffer from a lack of motivated physician involvement. State agencies and state medical organizations must work together to identify these under-served areas and to enlist the help of capable persons in filling the gaps.

Certainly one of the most important priorities for the 1990s is the stabilization of the involvement of volunteers in prehospital care. This will have a sizable impact on both pediatric and adult EMS. It is time to recognize the unflagging

devotion that thousands of volunteers across North Carolina have shown to EMS on a daily basis.

Efforts must be taken to provide whatever incentives are necessary to offer a tangible endorsement of the volunteer's service. One option would be to provide a form of tax incentive to employers whose employees volunteer for daytime EMS coverage. Therefore, the loss in productivity that they experience when these volunteers leave the job site to respond to a call could be, at least partially, offset. Alternatively, this tax incentive could be passed to the volunteers themselves. Further, recruitment efforts need to focus on segments of the population that have been under-utilized for prehospital personnel. Specifically, recent high school graduates, older citizens, and lower socioeconomic groups may provide significant numbers of persons with available time and a willingness to make a commitment.

Another major emphasis for pediatric emergency care must be further recognition that the airway is the initial route of evil. A professional's ability to provide a stable airway goes a long way in their ability to stabilize the patient. The national Consensus Workshop on EMS training held early in 1990 by the U.S. Department of Transportation promoted increased training emphasis on airway as one of the top five priorities in EMS training in the 1990s.[4]

Strong consideration must be given to certifying technicians at lower levels in the skill of endotracheal intubation. The lack of alternatives to the endotracheal tube for providing a stable invasive airway continues to limit the ability of EMT-Intermediates to intervene successfully in this area. The esophageal obturator airway and the pharyngeal tracheal lumen airway are just not available in pediatric size. Although the skill of endotracheal intubation is certainly one that cannot be mastered without appropriate practice, the numbers of children whose morbidity will be substantially reduced, by reducing brain hypoxia, should offset the increased requirements for practice on an ongoing basis. Additionally, the skills of mouth-to-mask and bag-valve-mask ventilation need to receive increased attention in initial training and continuing education classes at all levels of certification.

Numerous articles over the past few years have demonstrated the efficacy of intraosseous infusions as an alternative means for fluid resuscitation and parenteral medication therapy when a peripheral line cannot be readily started in a critical pediatric patient. This skill deserves further development and expansion of its use in North Carolina.[5-7]

Prehospital providers must be encouraged to develop specific treatment protocols for their pediatric patients. This off-line form of medical direction serves not only as a guideline for actual treatment, but also as training and continuing education assistance. Increased emphasis needs also to be placed on the amount of time devoted to pediatric emergency care in the initial training and continuing education phases. Many individuals cite the infrequency with which critical pediatric patients are encountered by most prehospital technicians as a reason for minimizing the educational time devoted to these patients. However, this lack of emphasis and time in education merely perpetuates the technician's anxiety and apprehension in confronting these individuals. Educators and EMS managers must work together to determine ways to optimize the available training time and ensure that knowledge and skills will be available when these patients present themselves.

Given that a significant number of critically ill and injured pediatric patients will not be able to receive definitive care at community hospitals, there has to be a coordinated method for transferring them from the outlying hospital to pediatric critical care centers. While this may amount to a very small percentage of pediatric patients, it is nonetheless a crucially important group. It is vitally important to establish a network of pediatric intensive care units and facilities recognized for their expertise in pediatric trauma care across the state. Coupled with these centers there must be transport modalities whether by ground or by air. Finally, these critical care centers must communicate closely and frequently so that bed availability from one center to another is known and referring physicians do not need to "shop" for an open bed.

The newly developed pediatric critical care courses, PALS and APLS, must be made available to emergency departments and prehospital professionals out in the communities. Currently, these courses are being taught at the tertiary care centers in the state. Over the next few years, course directors will need to analyze the effectiveness of their courses in decreasing pediatric morbidity and mortality. The mechanisms must be developed for either transporting these courses out into the farthest reaches of the state, or transporting the professionals in the community into the tertiary centers.

Research is certainly still needed. There will always be limited money available for pediatric care, and research methods must be developed to help discern the most appropriate ways to spend that money. Evaluations of new methods of patient care must be conducted. In some cases, analysis of existing, and even traditional, methods of patient care must be conducted. There are databases developing in the state right now that can assist clinicians in tackling these issues, such as the North Carolina Statewide Trauma Registry.

Conclusions

In the final analysis, individual people are the key to success. Individuals have spawned the past accomplishments in North Carolina in pediatric emergency medical care. Similarly, individuals must create and catalyze the future for children. Official agencies of the state and the private sector can assist, but frequently are able to offer only limited personnel and financial resources. This will thrust the bulk of the responsibility onto individuals and motivated groups who are ready to work together.

There needs to be an emphasis on simple, life-saving interventions. In the BLS arena, this probably means an emphasis on simple maneuvers for opening

a child's airway and for maintaining body temperature. In the ALS arena, certain invasive airway maneuvers are to be strongly emphasized, as well as methods for fluid resuscitation (including intraosseous infusions) and maintenance of normal blood sugar levels. These approaches, coupled with the realization that pediatric emergency care is not tricky but is different from adult emergency care, will carry the children of today into tomorrow. ❑

Acknowledgments

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Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Patients with heart failure given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed; caution should be observed when initiating therapy. (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology. It may be advisable to eliminate the diuretic (except in patients with heart failure), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, *Drug Interactions* and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident.

If excessive hypotension occurs, the patient should be placed in the supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary.

Neutropenia/Agranulocytosis: Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Fetal/Neonatal Morbidity and Mortality: ACE inhibitors, including VASOTEC, can cause fetal and neonatal morbidity and mortality when administered to pregnant women.

Enalapril crosses the human placenta. When ACE inhibitors have been used during the second and third trimesters of pregnancy, there have been reports of hypotension, renal failure, skull hypoplasia, and/or death in the newborn. Oligohydramnios has also been reported, presumably representing decreased renal function in the fetus; limb contractures, craniofacial deformities, hypoplastic lung development and intrauterine growth retardation have been reported in association with oligohydramnios. Patients who do require ACE inhibitors during the second and third trimesters of pregnancy should be apprised of the potential hazards to the fetus, and frequent ultrasound examinations should be performed to look for oligohydramnios. If oligohydramnios is observed, VASOTEC should be discontinued unless it is considered life-saving for the mother.

Other potential risks to the fetus/neonate exposed to ACE inhibitors include: intrauterine growth retardation, prematurity, patent ductus arteriosus; fetal death has also been reported. It is not clear, however, whether these reported events are related to ACE inhibition or the underlying maternal disease. It is not known whether exposure limited to the first trimester can adversely affect fetal outcome.

Infants exposed *in utero* to ACE inhibitors should be closely observed for hypotension, oliguria, and hyperkalemia. If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion.

Enalapril has been removed from the neonatal circulation by peritoneal dialysis and theoretically may be removed by exchange transfusion, although there is no experience with the latter procedure.

There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril, but did not occur when these animals were supplemented with saline. Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day but not at 30 mg/kg/day (50 times the maximum human dose).

If VASOTEC is used during pregnancy or if the patient becomes pregnant while taking VASOTEC, the patient should be apprised of the potential hazards to the fetus.

Precautions: *General: Impaired Renal Function.* As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia: Elevated serum potassium (> 5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation.

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See *Drug Interactions.*)

Cough: Cough has been reported with the use of ACE inhibitors. Characteristically, the cough is nonproductive, persistent and resolves after discontinuation of therapy. ACE inhibitor-induced cough should be considered as part of the differential diagnosis of cough.

Surgery/Anesthesia: In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients: Angioedema. Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension: Patients should be cautioned to report lightheadedness, especially during the first few days of therapy. If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure; patients should be advised to consult with the physician.

Hyperkalemia. Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia. Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

NOTE: As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions: Hypotension: Patients on Diuretic Therapy. Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release: The antihypertensive effect of VASOTEC® (Enalapril Maleate, MSD) is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents: VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium: VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium: Lithium toxicity has been reported in patients receiving lithium concomitantly with drugs which cause elimination of sodium, including ACE inhibitors. A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. It is recommended that serum lithium levels be monitored frequently if enalapril is administered concomitantly with lithium.

Pregnancy: Pregnancy Category D. See WARNINGS, *Fetal/Neonatal Morbidity and Mortality.*

Nursing Mothers: Enalapril and enalaprilat are detected in human milk in trace amounts. Caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients.

HYPERTENSION: The most frequent clinical adverse experiences in controlled trials were: headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were: diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

HEART FAILURE: The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category:

Cardiovascular: Cardiac arrest; myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, *Hypotension*); pulmonary embolism and infarction; pulmonary edema; rhythm disturbances including atrial tachycardia and bradycardia; atrial fibrillation; palpitation.

Digestive: Ileus, pancreatitis, hepatitis (hepatocellular [proven on rechallenge] or cholestatic jaundice), melena, anorexia, dyspepsia, constipation, glossitis, stomatitis, dry mouth.

Musculoskeletal: Muscle cramps.

Nervous/Psychiatric: Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia.

Respiratory: Bronchospasm, rhinorrhea, sore throat and hoarseness, asthma, upper respiratory infection.

Skin: Exfoliative dermatitis, toxic epidermal necrolysis, Stevens-Johnson syndrome, herpes zoster, erythema multiforme, urticaria, pruritus, alopecia, flushing, diaphoresis.

Special Senses: Blurred vision, taste alteration, anosmia, tinnitus, conjunctivitis, dry eyes, tearing.

Urogenital: Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION), impotence.

A symptom complex has been reported which may include a positive ANA, an elevated erythrocyte sedimentation rate, arthralgia/arthritis, myalgia, fever, serositis, vasculitis, leukocytosis, eosinophilia, photosensitivity, rash, and other dermatologic manifestations.

Angioedema: Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

Hypotension. In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure. (See WARNINGS.)

Fetal/Neonatal Morbidity and Mortality: In infants exposed *in utero* to ACE inhibitors the following adverse experiences have been reported: Fetal and neonatal death, renal failure, hypoplastic lung development, hypotension, hyperkalemia, skull hypoplasia, limb contractures, craniofacial deformities, intrauterine growth retardation, prematurity and patent ductus arteriosus. (See WARNINGS, *Fetal/Neonatal Morbidity and Mortality.*)

Clinical Laboratory Test Findings: Serum Electrolytes: Hyperkalemia (see PRECAUTIONS), hyponatremia.

Creatinine, Blood Urea Nitrogen: In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis. (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

Hemoglobin and Hematocrit: Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g% and 1.0 vol%, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0.1% of patients discontinued therapy due to anemia.

Other (Causal Relationship Unknown): In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported. A few cases of hemolysis have been reported in patients with G6PD deficiency.

Liver Function Tests. Elevations of liver enzymes and/or serum bilirubin have occurred.

For more detailed information, consult your MSD Representative or see Prescribing Information, Merck Sharp & Dohme, Division of Merck & Co., INC., West Point, PA 19486. J9VS61R2(824)

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"From early childhood, I understood that the health of the State came first in our household"

Dr. Thomas F. Wood and the North Carolina State Board of Health

E. Daniel Shingleton

The words in the title of this article were spoken by Miss Jane Wood while reflecting on the life of her father, Dr. Thomas Fanning Wood of Wilmington. Dr. Wood was the father of the North Carolina State Board of Health and of organized public health work in the state. The story of Dr. Wood's life and work is intertwined with the story of the State Board of Health during its formative years.

The North Carolina State Board of Health existed from 1877 to 1973. Those 96 years are a panorama of public health history and a commentary on the interaction of personalities, politics, and economics. They are also a commentary on the commitment and sacrifice of people who joined the public health family in the state and worked with great zeal to protect and improve the health of all North Carolinians.

For one to fully appreciate the role of public health in North Carolina, it is necessary to return to the beginning and to review how the State Board of Health was created.

From the Maternal and Child Health Supervisor, Eastern Regional Office, Department of Environment, Health, and Natural Resources. Mr. Shingleton is also Assistant Professor of Sociology, Barton College, Wilson 27893.

The State Board of Health[1]

By act of the General Assembly, the State Board of Health came into existence on February 12, 1877. Dr. Thomas Wood of Wilmington and his friend and colleague Dr. Soloman S. Satchwell of Rocky Point, in concert with the North Carolina Medical Society, provided the leadership for the creation of the Board and nurtured it during the beginning years. This was no small achievement given an annual appropriation of $100 for the Board's work across the state. In November, 1877, Wilmington's *Weekly Star* newspaper criticized this meager funding and observed: "We believe that an appropriation of $2,000 would not have been more than enough to carry out successfully and efficiently the very important end in view."[2] Dr. Wood reluctantly accepted the $100 appropriation, but set an immediate goal to increase the financial resources available for public health work. By 1890, the funding had increased to $2,000.

North Carolina's State Board of Health was the twelfth such Board created in the United States. From 1877 to 1878 all members of the state medical society were considered Board members. This large membership proved extremely impractical and cumbersome. In 1879, the membership of the Board was changed to include nine members: six to be appointed by the medical society and three to be appointed by the governor. The first president of the board was Dr. Satchwell of Pender County and the first secretary-treasurer Dr. Wood of New Hanover County. By virtue of this office, Dr. Wood became North Carolina's first state health officer. This Board and the agency it would create would serve as North Carolina's official public health organization until 1973.

Dr. Thomas Fanning Wood

Thomas Fanning Wood was born in Wilmington on February 23, 1841, the son of Robert Barclay and Mary Wilbur Wood. Tradition indicates that his parents moved to Wilmington from Nantucket, Massachusetts in 1839 in order for Robert Wood to work with his brother John on the construction of the new St. James Episcopal Church. Thomas Wood's early education consisted of public school in his home town and work assignments in the local office of a physician and a pharmacist. It was here that he was introduced to the world of medicine.[3]

Events of 1861 in Washington, D.C., and in Charleston Harbor would profoundly affect Thomas Wood's life. On October 9, 1861, at the age of 20, he enlisted as a private in the Eighteenth Regiment of the North Carolina Infantry of the Confederate Army, and he was assigned to Company I, known as the "Wilmington Rifle Guards." His military duty took him to Fort Fisher, North Carolina; Coosawhatchie, South Carolina; the Battle of Hanover Courthouse; and the Seven Days Battle around Richmond in 1862.[3]

Of more importance for our state and his life was the assignment he received to the North Carolina Hospital in Richmond and his attendance at lectures at the Medical College of Virginia. His Civil War record indicates that he served with distinction in each assignment. His record also indicates that he was present at Appomattox Courthouse with General Lee's army at the surrender of the Confederacy, April 9, 1865. Thomas Wood entered the Confederate Army as a private in a rifle company, and was discharged as a captain and a physician.[3]

Upon his return to Wilmington, he began the practice of medicine in August, 1865. At this time he organized and headed the community's Smallpox Hospital. A biography of Dr. Wood published by the North Carolina Medical Society described this period as follows:

> The invading armies had left behind them in his native town an epidemic of smallpox, which grew to such an extent that it became necessary for the community's safety that a hospital be established for the diseased and indigent Negroes who were here in flocks, largely without means of support and unable to care for themselves when overtaken by sickness. This work aroused in him a desire to study thoroughly the subject of vaccination, and the interest then awakened never waned.[4]

This hospital, under the guidance of Dr. Wood, cared for hundreds of patients. The experience of caring for poor and suffering people, combined with his army experience, was his schooling in public health. He understood the need for public health work in Wilmington and ultimately throughout the state. From 1865 on, he never wavered in this commitment.



Thomas Fanning Wood, M.D.

Time and time again, Wilmington's Dr. Wood distinguished himself and brought honor to his state and home community. He received an honorary Doctor of Medicine degree from the University of Maryland in 1868. He served as secretary of the Medical Society of North Carolina from 1868 to 1871 and of the Board of Medical Examiners from 1867 to 1872. He was elected president of the medical society in 1882. It is interesting to note that his son, Dr. Edward Jenner Wood, served as president of the medical society 28 years after his father. This is one of very few instances of a father and son serving in that capacity.

Dr. Wood co-founded the *North Carolina Medical Journal* and served as editor from its founding until the year he died. An excellent article by Drs. Felts and Prichard in the January, 1990 issue of the *Journal* described this venture:

> In 1878, the first *North Carolina Medical Journal* was established in Wilmington, By Drs. Thomas F. Wood and Moses John DeRossett III, as a private publication. It was adopted, during most of its life, by the state society as its official publication but received no financial support. After 22 years in New Hanover County, it moved to Mecklenburg in 1900 and changed

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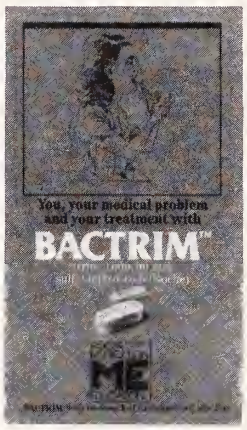
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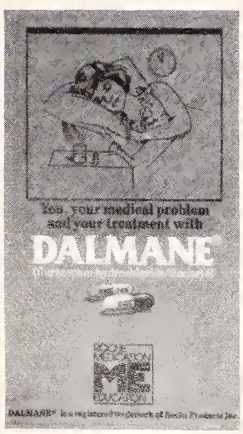


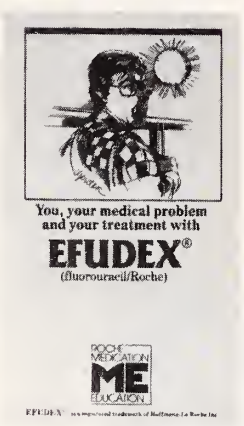
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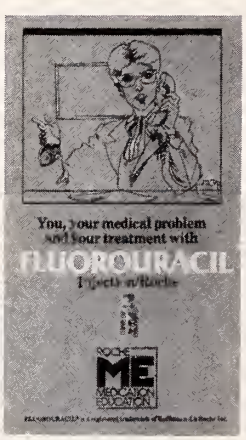
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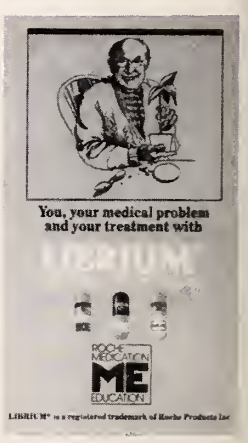
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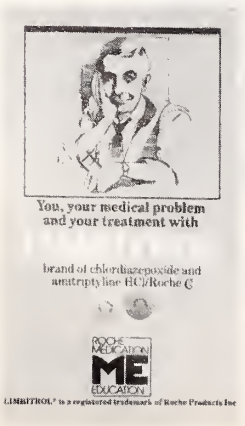
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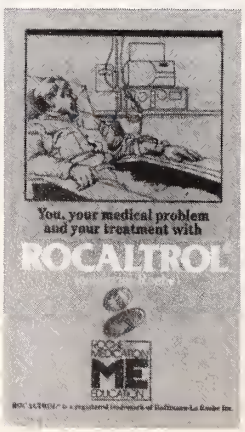


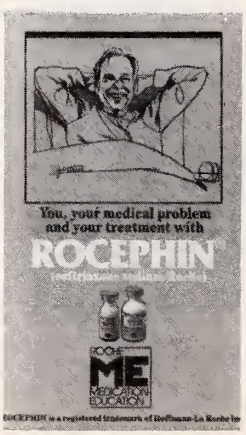


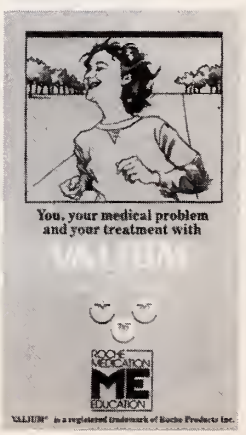














Dr. Wood's home, circa 1886. The house, which stood at the corner of Chestnut and Second Streets, Wilmington, was the first home of the State Board of Health.

its name to the *Carolina Medical Journal*. Eight years later, it merged with the *Charlotte Medical Journal*, losing its name. The *Charlotte Medical Journal*, founded in 1892, recognized the merger primarily by changing its volume numbering to that of the older publication. The combined journals were edited by the staff of the *Charlotte Medical Journal*, and their operations combined at the latter's office at 36 South Tryon Street.

When Drs. Wood and DeRossett started their journal, Wilmington was the largest town in the state, an old port community connected by the Wilmington, Charlotte, and Rutherfordton Railroad to the growing Piedmont. By the time of the journals' merger, Charlotte had almost completely overtaken its coastal rival as the leading transportation and business center in the state.[5]

Another field that became a lifelong interest for Dr. Wood was the study of botany. He was an avid student of the subject and became a national authority on the flora of southeastern North Carolina and of the South. His book, co-authored with Gerald McCarthy, entitled *Wilmington Flora: A List of Plants Growing About Wilmington North Carolina with Date of Flowering with a Map of New Hanover County*, was published in 1886. As one of Dr. Wood's contemporaries observed:

> His journeys in the country, or an occasional jaunt in the woods near Wilmington, always served him for a day or hour of study. To him the simplest flower, the humbled weed, the waving grass, the stately trees—all of them were loved acquaintances. They spoke to him of the wonders of the study he so earnestly followed; and, besides elevating his mind, improving his memory, and enlarging his knowledge, they told him, in no uncertain terms, of the greatness and wisdom of the God whom he humbly worshipped.[6]

Another interest to which he devoted time and financial resources was the Library Association of Wilmington. He was the Association's president at the time of his death. It is worthy of note that the New Hanover County Library stands today at the corner of Second and Chestnut Streets, which was the site of Dr. Wood's home and the first home of the State Board of Health. Here he lived, reared a family, practiced medicine, and served in all of the other capacities outlined in this article.

Dr. Wood's involvement in public health spurred him to seek the advice and counsel of public health workers outside the state and to become a founding member of the American Public Health Association. He was elected vice-president of this association in 1891 and surely would have become its president had he remained healthy.

There is another dimension of Dr. Wood's devotion to public health that makes all that has been described about him even more remarkable. It is summarized in a *North Carolina Medical Journal* article of 1892:

> In the spring of 1885 he accompanied the Penitentiary authorities on a tour through the camps of the convicts then at work on the Western NCRR [North Carolina Railroad] in the mountains. It became necessary for him to carry his heavily-packed travelling bag up a steep incline—on the mountainside. At the end of the climb he experienced a stabbing pain in the right side, but a few moments' rest dissipated it, and he thought no more about it. ... At the request of his medical friends in Wilmington he went to New York and had the best advice obtainable there. The diagnosis (aneurysm of the aorta) was confirmed and treatment advised directly in the line already adopted, to stay in bed for a year or more absolutely, regulating his diet to simple farinaceous food and milk, and for medicine to take iodide of potassium. This advice he strictly followed, and he was in his bed for 18 months and adhered to the prescribed diet and medicines rigidly. His restoration to his work was a source of thankfulness to his hosts of friends, and hopes were entertained that his life would be spared until old age should terminate it. Whenever he attempted to do more

than an easily accomplished amount of labor, he was disabled and was forced to bed to recuperate again. About two years ago he began to show signs of decadence in his strength and was easily fatigued by any unusual strain upon his physical powers. This increased, and as his end came nearer, he grew more and more decrepit.

In the midst of all these obstacles with a certain knowledge that he was the victim of a fatal injury, he kept up his spirits and maintained an office work that was surprising in amount. It embraced not only his professional work as a private practitioner, but also the onerous duties of the secretary of the State Board of Health. His death came suddenly, being preceded by a day and night of painful dyspnoea and a pulmonary congestion due to pressure.[4]

His death came near the two o'clock hour on August 22, 1892. He had lived 51 years. Those 51 years changed the course of history in North Carolina. His interest and dedication had created a state public health agency for all North Carolinians.

Two tributes to Dr. Wood have special significance. The first was delivered by his lifelong friend Dr. George T. Thomas of Wilmington:

> When I realized that the days of suffering of Dr. Wood had come to a sudden close, I knew more than I can tell this society [Medical Society] how I loved the man and how I should miss him. It was my special privilege as many of you know, to have been his intimate associate in many ways, and I was in the main his physician in the later years of his life. Living so closely with him during these years, I came to recognize the depth and strength of his character. He was a man of high ideals and lived up to them. The aspirations of his life pervaded all of his labor. They were not the selfish ambitions of a time-server, a place-seeker. He worked for the best because it was the best as he knew it, and his strict adherence to principle was not always the popular thing to do. I had occasion more than once to stand with him against measures that concerned his friends and mine, but he never failed to come up to the measure of a well-rounded manhood. He was gentle and affectionate in his nature, and, while he boldly denounced wrong-doing, he never lacked the tenderest charity for the shortcomings of his fellow-men or failed to help the weak-hearted or wavering soul.[6]

Perhaps the most meaningful tribute to this life in public health came from his daughter, Miss Jane Wood. She was interviewed in 1941 by Ms. Jane Zimmerman for an article that would appear in the *North Carolina Historical Review*. Miss Wood said of her father:

> From early childhood, I understood that the health of the State came first in our household. My father was the first secretary [State Board of Health] and in those days no funds were provided either for salary or expenditures. The office was my father's medical office, the supplies were part of his private equipment, and it was out of his own pocket that the enterprise lived until it could get the support of the legislature. At that time we rather disliked the sacrifices this financial burden entailed, but when we grew old enough to realize what my father's efforts meant to the State, we were glad and proud to cooperate.[7]

Conclusion

This conclusion was written on February 12,1990—the one hundred thirteenth "birthday" of the State Board of Health. While the focus of this article has been the life and work of the first state health officer, it is important to acknowledge the names and years of service of Dr. Wood's successors. They were Dr. Richard Henry Lewis (1892-1909); Dr. Watson Smith Rankin (1909-1925); Dr. Charles O'Hagan Laughinghouse (1925-1930); Dr. James Marion Parrott (1931-1934); Dr. Carl Vernon Reynolds (1934-1948); Dr. John William Roy Norton (1948-1965); and Dr. Jacob Kooman, Jr. (1966-1978). In 1973, the state public health agency became the Division of Health Services in the Department of Human Resources. In 1989, this division was reorganized and became part of a newly created agency in state government—the Department of Environment, Health and Natural Resources. Drs. Jacob Kooman, Jr., Hugh Tilson, and Ronald Levine have served as the leaders of the state public health agency since the demise of the State Board of Health in 1973. This 17-year period is also worthy of study and evaluation.

In 1892, the year of Dr. Wood's death, long-distance telephone service between New York and Chicago was inaugurated; the automatic telephone switchboard was introduced; the first successful gasoline powered automobile was perfected; and Diesel patented his internal combustion engine.[8] The public health community of 1892 did not realize that such technologies along with hundreds of others would bring so many side effects. New words and new problems such as acid rain, hazardous and solid waste, medical waste, transportation accidents, occupational health and safety, nuclear weapons, greenhouse gases, leaking underground storage tanks, desertification, and a host of others would be added to the list of global, national and community health concerns.

On February 8, 1990, at an Emergency Issues Forum held at North Carolina State University, Dr. Carl Sagan, Distinguished Professor at Cornell University and the producer of the well-known television series "Cosmos," presented a fascinating lecture on our "global commons" and our precious environment. He noted that we have spent ten trillion dollars on the Cold War since 1945. According to Dr. Sagan, this represents enough money to purchase everything existent in the United States today

excluding the land. While we may have become militarily secure, we have become environmentally insecure. While nation states wasted political rhetoric and enormous financial resources on defining and preparing to fight the "enemy," the real threat to our health and security has emerged in the form of global disregard of the fragile ecosystems of the planet. Thus the health and well-being of the five billion who call the earth home remains in question.

The World Health Organization declared April 7,1990, as "World Health Day." The first year's theme is "Our Planet—Our Health: Think Globally—Act Locally." Yes, we have spent trillions on preparation for war, but it was for the wrong type of war! How much are we going to invest in saving the planet and maintaining the public health of our state, nation, and world? Dr. Wood said in Asheville in 1891, "The People of North Carolina understand that public health is public wealth."[6] Is this true? ❑

References

1 The term State Board of Health is used in this article to refer to the Board itself and to the state public health agency that operated under the Board's auspices.

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4 Thomas GT. Thomas Fanning Wood. NCMJ 1892;30:168-75.

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6 Cooper GM, The Woods—Father and Son. Southern Med and Surg 1928;12:7.

7 Zimmerman Jane. The formative years of the North Carolina State Board of Health, 1877-1893. NC Hist Rev 1944;22:12.

8 Grun B. The Timetables of History. New York: Simon and Schuster, 1946, p. 447.

AUTHORS

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Attach to the two copies of the manuscript a cover letter giving the address and telephone number of the person who will correspond about it, and address the completed communication to the Editor, Box 3910, Duke University Medical Center, Durham, NC 27710.

All manuscripts are subject to editorial changes. If extensive revision is necessary, the author may be sent a draft of the edited article for approval before publication. The author will be sent galley proofs if the paper is published.

Authors interested in more effective writing may find *The Elements of Style* by Strunk and White and *How to Write and Publish a Scientific Paper* by Day helpful.

Extracted, with permission, from *Virginia Medical* with thanks.

Letters to the Editor

Student Publication

To the Editor:

The journal of student inquiry entitled *Fax* has just come to my attention. The fact that it is the fifth volume of this fine publication has stimulated this letter. The format and articles of student research endeavors are exceptionally well presented and I am embarrassed that four previous volumes have escaped me. I wonder if other physicians in our state are aware of the fine research work that students are doing throughout our schools. In no way to detract from the excellent work that has gone into *Fax*, but rather to allow wider dissemination, I suggest that you consider devoting a section of the *North Carolina Medical Journal* to abstracts and student research papers. There is also a need for a forum for student thoughts and communications that might be provided by such a section in our state medical journal. It was distressing to hear recently from the president of the North Carolina Medical Society that membership is at its highest while attendance at state meetings is very low. Student participation in the organ of the state society might foster greater interest in its activities during formative years. Increase in student readership might be another benefit of such a section.

John D. Tolmie, M.D.
Associate Dean for Academic Affairs
Bowman Gray School of Medicine
Winston-Salem 27103

Editor's Response:

You are correct. The editor did not know of the student publication entitled *Fax*. Thank you for the information. The pages of the *North Carolina Medical Journal* are open to all citizens concerned with the health and well-being of persons in North Carolina. During the last 12 months we have published five papers authored by students, and two papers co-authored by students and doctors. We will be glad to listen to any proposals by students which are designed to increase the students' stake in the *Journal* and in the North Carolina Medical Society. I hope you will be the catalyst to spark the interaction.

Eugene A. Stead, Jr., M.D., Editor

Comment on Dr. Anderson's article on ophthalmic research

To Dr. Anderson:

I certainly did enjoy reading about retinoblastoma and the genetic studies which you have reported (Dedicated Ophthalmic Research, NCMJ 1991;52:33-4). That is really fascinating, and I'm pleased that you were able to tell the Society membership about this most fascinating work.

Paul J. Simel, M.D., FACS
Simel Eye Associates of NC
300 W. Northwood St.
Greensboro 27401

Comment on Dr. Young's article on Physicians for Social Responsibility

To the Editor:

Perhaps one should not respond to the views of the group calling themselves "Physicians for Social Responsibility" since it is obvious to most of us that the knowledge of nuclear energy is not going to disappear. It is necessary to emphasize, however, that most physicians do not agree with the naive ideas they espouse. In spite of the dire predictions of this group, Hiroshima and Nagasaki are busy thriving cities today. Those two bombs saved countless Japanese and American lives. One can only shudder at what the results of a ground invasion of Japan in 1945 would have been.

The view that if we get rid of our defense capability the world would be a safer place to live is not shared by most people. It would be simply wonderful if men and women in this world were able to settle their differences intelligently, sanely and reasonably with satisfactory compromises. Unfortunately, such is not always the way differences are settled. The United States can give up its nuclear superiority when we can give up the police forces in Washington DC and New York City.

I would suggest that this group be named "Physicians for Social Irresponsibility" as they want us to bury our head in the sand, give up our nuclear deterrent and leave us at the mercy of every two-bit dictator that muscles to power.

John A. Henderson, M.D.
117 Rathfarnham Circle
Asheville 28803

Dr. Young's Response:

In response to Dr. Henderson, let me state clearly that Physicians for Social Responsibility does not now, and never has advocated unilateral nuclear or any other kind of disarmament. We do advocate negotiated, multilateral reduction and eventual elimination of nuclear and chemical and biological weapons, all under international supervision with provision for effective verification of compliance. The first step must be a verifiable multilateral Comprehensive Nuclear Test Ban Treaty, now easily in reach if the United States and Britain would agree.

As the Persian Gulf war illustrates, if this is not done, the "two-bit dictators" of the world will soon face us with nuclear weapons and chemical/biological weapons unless we are prepared to make war in many places to eliminate their weap-

ons plants, surely not a good way to control proliferation of these weapons.

Daniel T. Young, M.D., President
Physicians For Social Responsibility

Editor's Comment:

I am a member of Physicians for Social Responsibility. Lay persons believe that doctors can save people during a nuclear war as they have saved people in non-nuclear wars. Only doctors can tell the people that there are no medical answers to nuclear war. Civil defense, bomb shelters, stockpiled food, blood banks, and doctors and hospitals will be useless, and the public should know this. Physicians for Social Responsibility are the only doctors who have leveled with the public.

Eugene A. Stead, Jr., M.D., Editor

Comment on Dr. Rutledge's article on lab tests for surgical patients

To the Editor:

The recent NCMJ article regarding laboratory testing of surgical patients (Rutledge R, et al., The Optimum Use of Laboratory Tests in the Surgical Patient, 1991;52:36-40) needs some additional commentary regarding (1) the difference between incremental costs and average cost, and (2) the distinction between costs and charges for hospital laboratory services.

Firstly, Rutledge et al. state that a 25% reduction in the number of arterial blood gas (ABG) determinations done in the ICU would, in their hospital, reduce monthly charges by $7,000. One should note, however, that the space, equipment and staffing requirements are unlikely to be reduced in this setting. Thus the costs of providing blood gas services to the ICU would be reduced, in all likelihood, only by the incremental costs of the disposable supplies required to do this testing—several hundred dollars per month.

Secondly, a charge of $100 per ABG set is far in excess of costs at least as most of us would calculate them or even on the scale typically used for other common hospital laboratory analyses. Considering only the equipment, space and staff requirements, the direct costs of an ABG are approximately the same as for an automated CBC. The much-higher charge for the ABG is the result of long-obsolete cost analyses made back when ABGs were first introduced and done manually and very infrequently.

I recognize that hospitals have to meet overall expenses and that the allocation of institutional overhead to the "high-profit" areas of laboratory, radiology and pharmacy services is perhaps as equitable as any alternative system. The purpose of this note is not to criticize hospitals for excessive laboratory charges but to point out the necessity of using rational cost analyses to reach conclusions regarding the cost implications of various medical care options.

Michael L. O'Connor, M.D.
Director, Clinical Pathology
Bowman Gray School of Medicine
Winston-Salem 27103

Author seeks people with cerebral palsy

To the Editor:

I am currently in the process of editing a book concerning cerebral palsy, to and for those suffering from this disease.

I would like individuals who suffer from cerebral palsy to write to me about their efforts to overcome this handicap, the physical and emotional problems, and how they cope with the problems of everyday life. I would also like physicians to encourage their cerebral palsy patients to contribute to this.

I would like this to be an inspirational and educational book for those with cerebral palsy, and hopefully appeal to the general public as an interesting book.

I have read several books directed towards the parents of children with the disease, explaining how to deal with it, but have never seen a book to/for the cerebral palsy victims themselves.

Claude A. Frazier, M.D.
Doctors Park, Bldg. 4
Asheville 28801

A further comment on congenital syphilis

To Dr. Heyman:

I received my Christmas mail from the states today, which included your Letter to the Editor on Congenital Syphilis (NCMJ 1990;51:663-4 [commenting on my article, Congenital Syphilis: Resurgence of an Old Problem, NCMJ 1990; 51:512-6]). I wrote this before leaving on sabbatical, and was notified about its acceptance within a week. I thought that the timeliness was important and for our state thought it should be known. I hope the same fate holds true in my reply to the *Lancet* on human milk banks and feeding of premature infants to justify my time here. I appreciated your comments and I only wish I could get obstetricians and pediatricians as concerned and aware as you are.

James D. Thullen, M.D.
Gothenburg University
Department of Pediatrics I
East Hospital, S-41685
Goteborg, Sweden

Referral of patients with small cell carcinoma of the lung

To the Editor:

The National Cancer Institute (NCI)-Navy Medical Oncology Branch, located at the Naval Hospital, Bethesda, MD, and the Radiation Oncology Branch (NCI) request the cooperation of physicians in the referral of civilian or military patients with small cell carcinoma of the lung. Prospective patients must not have received previous chemotherapy or radiotherapy, must be at least partially ambulatory, and must be willing to return to Bethesda, MD, for periodic follow-up care.

These patients will participate in treatment programs of chemotherapy selected by in vitro drug testing against the patient's own tumor. Patients with limited stage disease will also receive twice a day chest radiotherapy. This limited stage study has thus far been successful with over 60% of the participants surviving more than two years.

Previously treated patients who are in excellent medical condition could be considered for a Phase II monoclonal antibody trial to determine if blocking the small cell lung cancer growth factor GRP is of clinical benefit, or for other Phase I-II studies (e.g., Ipomeanol, and Hepsulfam). These phase I and II studies are not appropriate for patients with documented brain metastases.

The referring physician will be kept informed of the results of staging and therapy and will be encouraged to participate in the follow-up care of the patient. Since patients with small cell (oat cell) lung cancer often require prompt treatment, physicians interested in referral are asked to telephone:

Attending Physician
NCI-Navy Medical Oncology
Branch Bldg. 8, Room 5101
National Naval Medical Center
Bethesda, MD 20889-5105
301/496-0901.

Your consideration of possible referral of newly diagnosed patients with small cell lung cancer would be appreciated.

Bruce E. Johnson, M.D.
Daniel C. Ihde, M.D.
Principal Investigators
Limited and Extensive Stage Small Cell Lung Cancer Trials
Eli Glatstein, M.D.
Chief, Radiation Oncology Branch
NCI-Navy Medical Oncology Branch
National Naval Medical Center

Comment on Dr. Steinberg's article on drug prescribing

To the Editor:

Congratulations and thank you for the editorial by Dr. John Steinberg, published in the December issue of the *Journal* (Chemical Dependency and Prescription Drugs, NCMJ 1990;51:640-2). I do not know Dr. Steinberg, but he has written a very sensible editorial which will hopefully put out some of the fires which were lit by the article and counter-article last year (Sanders JR, Prescribing Addictive Medications, NCMJ 1989; 50:105, and Nemeroff CB, The Rational Use of Narcotic Analgesics, Benzodiazepines and Psychostimulants in Medical Practice, NCMJ 1990;51:240-3).

I saw shortcomings in Dr. Sanders's article, but I was upset about Dr. Nemeroff's article. He stated, among other things, that he had no concerns giving patients with osteoporosis frequent (? and unlimited) narcotics.

We have enough difficulty with doctors around the state criticizing Duke doctors for sitting on their throne in the ivory tower, amusing themselves by criticizing the non-institutional doctors, rather than helping them. Dr. Steinberg's editorial is superb, and hopefully, will put this issue to rest.

Thomas B. Dameron, Jr., M.D.
Raleigh Orthopaedic Clinic, PA
PO Box 10707
Raleigh 27605

Dr. Stoodt's response to Dr. McLelland's letter

To Dr. McLelland:

Thank you for your kind comments (NCMJ 1991;52:103) about my article in the November issue of the *North Carolina Medical Journal* (Cancer of the Female Breast: Improving the Public's Health Through Early Detection, 1990;51:559-64). As you so well know, the issues around ensuring that women get appropriate early screening for breast cancer are complex. However, this should not deter us from addressing this important public health problem.

I and members of my staff have had the opportunity to talk with Dr. Etta Pisano about ways to improve mammography services in North Carolina. She has some promising ideas, and I eagerly anticipate fruitful collaboration to continue, probably once she returns "full-steam-ahead" from her recent pregnancy. I look forward to hearing further from her.

Georjean Stoodt, M.D., M.P.H.
Director, Division of Adult Health
Department of Environment, Health and Natural Resources
Raleigh 27611

Two comments on Dr. Graham's articles on the 'Old' UNC School of Medicine

To Dr. Graham:

Just a note to tell you how much I enjoyed "The Halcyon Days of Youth" (NCMJ 1990;51:628-34 [Part I]; 1991;52:44-9 [Part 2]).

As a member of the class of '51 we were not that far behind you. You brought back a lot of memories and it was very interesting and amusing.

Alton J. Coppridge, M.D.
3605 Rugby Road
Durham 27710

To Dr. Graham:

I have enjoyed very much reading "The Halcyon Days of Youth" written by you and published in two recent editions of the *North Carolina Medical Journal*. I have many memories of those distant years which I would like to share with you. You spoke of many people who were very dear to me and some of whom I considered to be pretty tough hombres. I do hope that we will see each other in the not-too-distant future. To me, my medical school years at the University of Pennsylvania were rather difficult ones for I was a real foreigner, but I did meet many people who have remained close friends through the years.

F.M. Simmons Patterson, M.D.
4503 Morgan Lane
New Bern 28562

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Place: Chapel Hill
Info: Baird S. Grimson, M.D., Dept. of Ophthalmology, CB# 7040, 617 Clinical Sciences Bldg., UNC School of Medicine, Chapel Hill 27599-7040

April 11-12
ACLS Provider Course
Place: Raleigh
Credit: 16 credits AAFP
Fee: $150
Info: Helen Creech, R.N., Course Coordinator, Rex Hospital, 4420 Lake Boone Trail, Raleigh 27607. 919/783-3161

April 11-13
Endovascular Surgery Symposium III
Place: Greensboro
Credit: 12 hours Category I, AMA
Fee: $750
Info: Ms. Nancy Edmonds Skelton, Symposium Coordinator - 1-800/456-CVTS or 919/373-8245

April 19
Pediatrics Day 1991
Place: Greenville
Credit: 6 hours Category I, AMA
Info: Mary C. Valand, Office of Continuing Medical Education, Box 7224, Greenville 27835-7224. 919/551-5200

April 29 - May 3
Spring Symposium '91
Place: Charlotte
Info: Faye Scott, Carolinas Medical Center, P.O., Box 32861, Charlotte 28232. 704/355-5225

April 30
Sports Nutrition: Dispelling the Myths, Emphasizing Sound Nutritional Practices
Place: Chapel Hill
Credit: 5.5 hours, Category I, AMA; Category A, NCMS
Fee: $80
Info: Phylliss Woody, Office of Continuing Education, UNC School of Public Health, CB #8165, Miller Hall, Chapel Hill 27599-8165. 919/966-4032

May 3
Fourth Annual Down-East Dermatology Day
Place: Greenville
Credit: 7 hours Category I, AMA
Info: Mary C. Valand, Office of Continuing Medical Education, Box 7224, Greenville 27835-7224. 919/551-5200

May 17
42nd Scientific Sessions, American Heart Association, North Carolina Affiliate: "Cardiovascular Epidemiology in North Carolina"; "Cardiac Arrhythmias"
Place: Research Triangle Park
Info: Alice Toth, American Heart Association, P.O. Box 2636, Chapel Hill 27515. 919/968-4453 or 1-800/331-6601

May 17-18
Home Care for the Technology Dependent Child With an Emphasis on Respiratory and Gastrointestinal Problems
Place: Durham
Credit: CME hours pending
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Info: Iley B. Browing, III, M.D., Assistant Professor of Pediatrics, Duke University Medical Center, Box 2994, Durham 27710

May 29
Laboratory and Clinical Development of Hematopoietic Colony-Stimulating Factors
Place: Durham
Credit: 4 hours Category I, AMA
Info: William P. Peters, M.D., Ph.D., Duke University Medical Center, Box 3961, Durham 27710. 919/684-6707

May 30 - June 2
Procedural Skills For the Family Physician-Office Gynecology
Place: Greenville
Credit: TBA - Category I, AMA
Info: Mary C. Valand, Office of Continuing Medical Education, Box 7224, Greenville 27835-7224. 919/551-5200

June 7-8
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Place: Raleigh/Durham
Credit: 12 hours Category I, AMA
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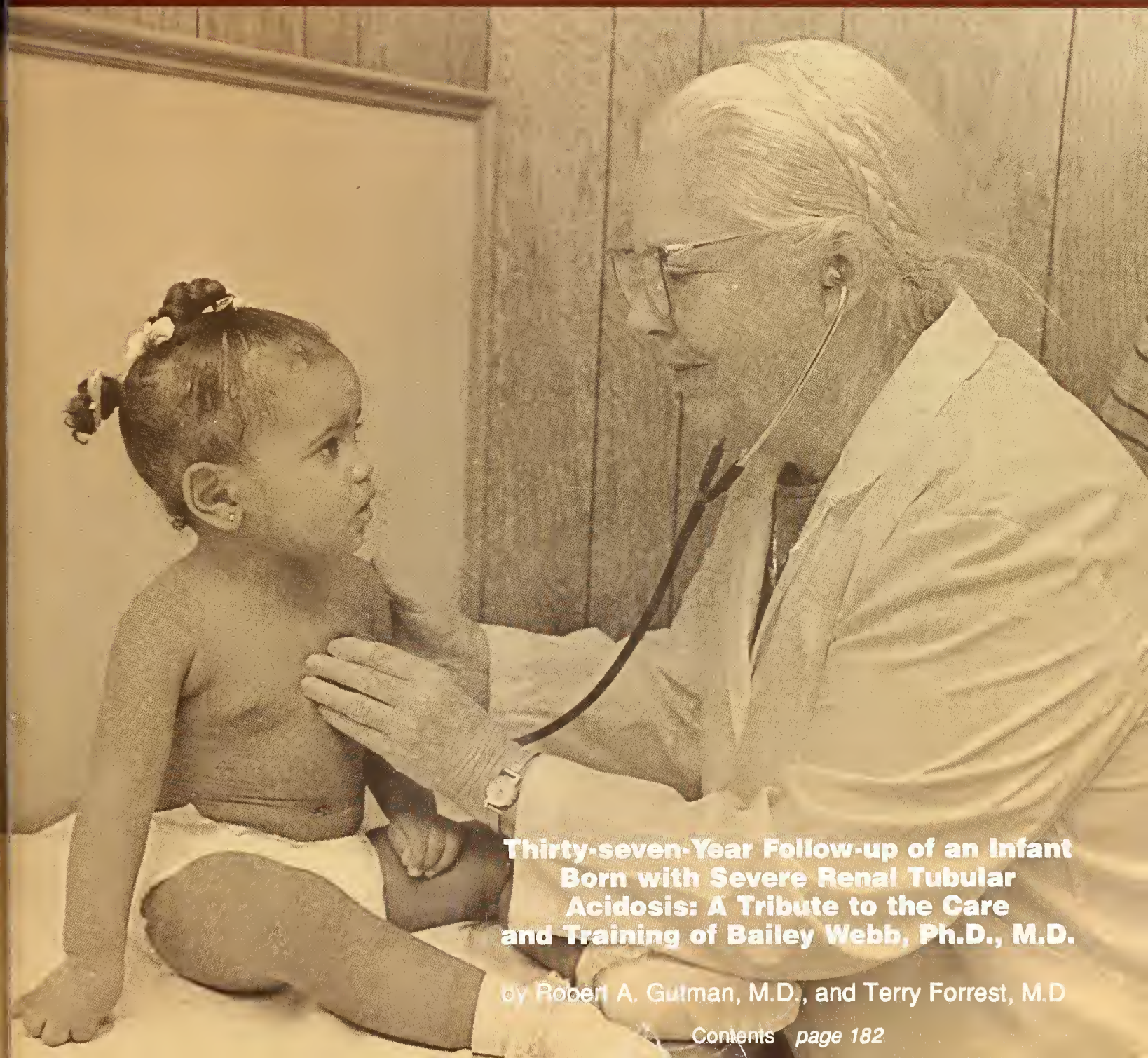
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For Doctors and their Patients



Thirty-seven-Year Follow-up of an Infant Born with Severe Renal Tubular Acidosis: A Tribute to the Care and Training of Bailey Webb, Ph.D., M.D.

by Robert A. Gutman, M.D., and Terry Forrest, M.D

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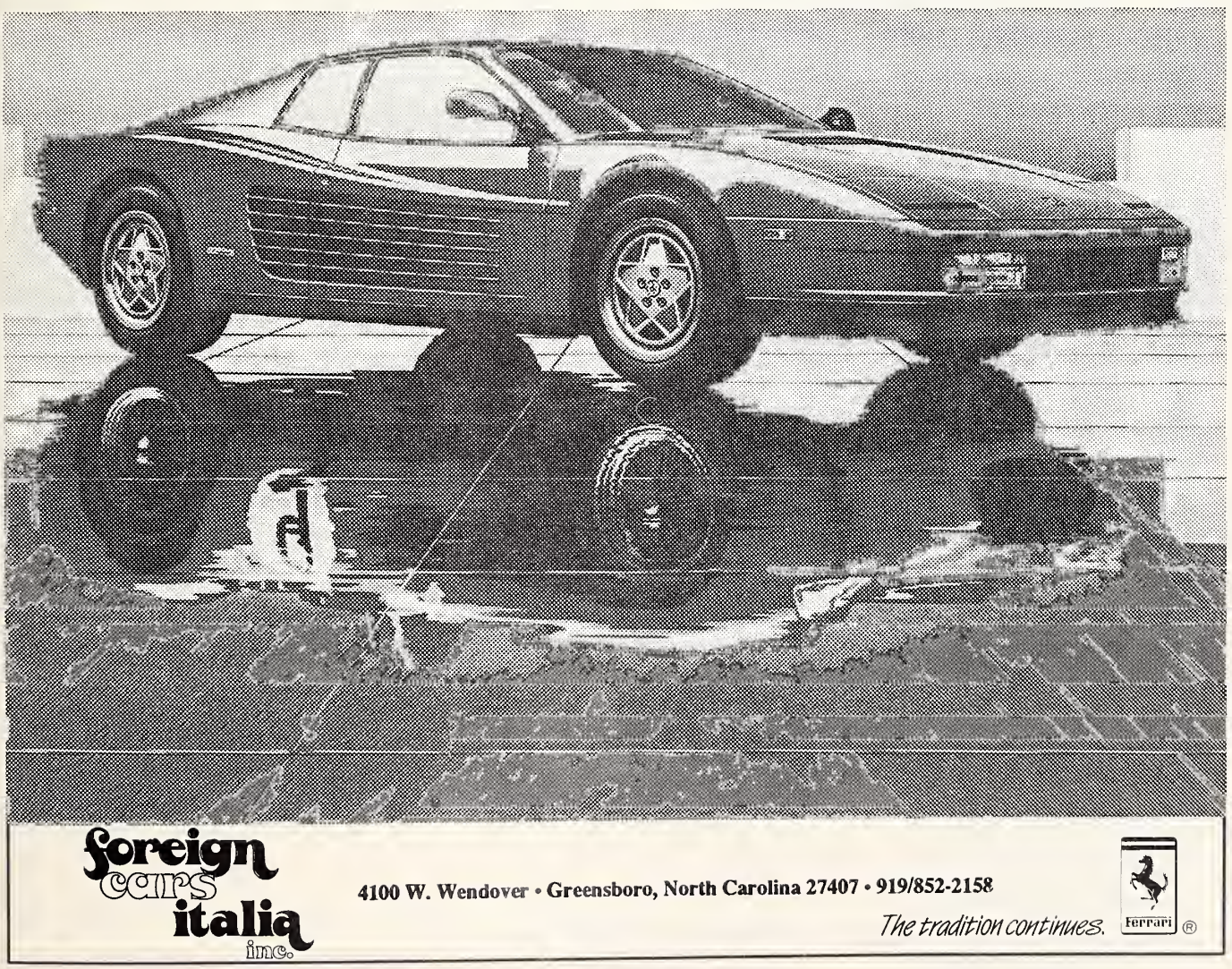
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FOR DOCTORS AND THEIR PATIENTS

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Thirty-seven-Year Follow-up of an Infant Born with Severe Renal Tubular Acidosis

A Tribute to the Care and Training of Bailey Webb, Ph.D., M.D.

Robert A. Gutman, M.D., and Terry Forrest, M.D.

We report a remarkably well documented long-term successful treatment of an infant born with severe renal tubular acidosis. Dr. Bailey Webb who retired recently kept meticulous records from which this report is derived. She entered practice in Durham in 1949 after completing Pediatric training at the St. Louis Children's Hospital, where she was exposed to Dr. Alexis Hartmann. Dr. Hartmann's understanding of aerobic metabolism in general and the use of lactate as a source for bicarbonate[1] (it was he who substituted lactate for bicarbonate in Ringer's solution) were transmitted easily to Bailey Webb. She was receptive to these concepts in part because of her own background in organic chemistry, including the first Ph.D. granted by the School of Medicine at the University of North Carolina - Chapel Hill in 1941. She went from there to Duke University to receive her M.D. in 1946.

Four years after entering practice, Dr. Webb encountered this newborn child. Her notes reflect close attention to detail, a deep caring for the child and an inquisitive mind. Thanks to this remarkable physician, the child grew normally and still enjoys good health. He also continues the same regimen which she outlined 36 years ago.

From Central Medical Park, Durham

Case Report

LWF was born July 22, 1953 at Watts Hospital in Durham after an uncomplicated pregnancy and delivery. His birth weight was 9 $^3/_4$ lbs. and he was developmentally normal. However, he failed to gain weight from the beginning. After three weeks of milk formula supplemented with sugar, he was noted to have lost 1 lb. 10 oz. His mother reported that he was listless but taking formula every two hours and voiding large quantities of urine. She said there had been neither vomiting nor diarrhea.

The infant appeared ill, hyperpneic, volume depleted, and his temperature was 101.0 F. His urine was dilute (specific gravity of 1.002), alkaline but negative for reducing substances and cysteine. Microscopic examination showed approximately 75 WBCs and 15 RBCs/HPF in centrifuged urine. Mixed flora were cultured from the urine. Abdominal radiograph showed bilateral nephrocalcinosis. The only serum chemistry ordered the day of admission (8/12/53) was a total CO_2 content value which proved to be 8 mm/l. Over the next two days, before therapy for the acidosis was started, other blood tests were done: Na=134 mEq/dl, K=4.6 mEq/l, Cl=120 mEq/l which taken together with the alkaline urine suggested the diagnosis of renal tubular acidosis (RTA). Further testing to indicate the type of RTA was not undertaken until three years later, but subsequent clinical events suggest the child suffered from a combination of features of both proximal and distal RTA. The initial serum calcium was 12.0 mgm/dl but subsequent values after correction of the acidosis and volume depletion approached, then reached, normal, and were never again abnormal. Similarly, an elevated blood urea nitrogen (41mg/dl) subsequently became and remained normal except for intermittent intercurrent illnesses when he was depleted of salt and water. Initially, he was treated with intravenous fluids containing only $^1/_6$ molar lactate, and remained listless. The measured serum bicarbonate remained low (10 mEq/l) for 10 days. Then Dr. Webb instituted therapy with 20 cc of oral lactate which her notes indicate was made from 36 ml of 50% sodium lactate diluted to 180 ml. This yields about 20 mM of lactate per day. Since the lactate then used was a racemic compound consisting of approximately 60% of the readily metabolizable l-lactate and the less physiological d-lactate, this would be expected to provide roughly 14 mEq per day of additional bicarbonate through the process of metabolism. This is approximately the same amount of non-metabolizable protein-derived protons a child this age would consume. Thus the child's needs for acidification of the urine were entirely obviated by the selection of

Dr. Bailey Webb

A Doctor Who Represents the Person We Would All Like To Be

We are pleased to honor Dr. Bailey Webb with the publication of an instructive account of one of her patients. Drs. Gutman and Forrest were able to prepare this case for presentation, not only because her treatment was successful, but because of the care she took in the preparation and preservation of the medical records.

Dr. Webb is indeed a remarkable lady and a special product of this area. She attended secondary school in Granville County where she was born in 1912. Before attending Duke University School of Medicine During World War II, she had already made her mark. She taught science at old Wilton High School in Granville County and then at the University of North Carolina Chemistry Department. It was there she encountered many other physicians well known in the Durham community, including Dr. James Davis. A Fels Foundation scholar, Dr. Webb was awarded the University of North Carolina School of Medicine's first Ph.D. in chemistry.

Although she has published several scientific articles and continues to this day to contribute to the published medical literature, Dr. Webb is best known for her love of the practice of pediatrics and of the care of children. She has always considered her career to be completely "natural." She simply loves children and the responsibility for their care. In presenting her the distinguished service award from the faculty and alumni of the UNC School of Medicine, the award committee reported: "she would go anywhere ... to administer to a child ... a living embodiment" of the ideal physician.

Nor was Dr. Webb's concern for children and society confined to the ordinary practice of pediatrics. During her clinical years she also worked intensely for a better society. She fought for renewed funding of the Wright School for disturbed adolescents, was a consultant on behalf of the American Academy of Pediatrics for the Head Start program, and served on the 1976 committee to draft a proposal for primary ambulatory health care.

Since retiring from private practice, Dr. Webb has remained engaged in the life of medicine and in children's concerns. As always, and as reflected in the care of the child discussed in the accompanying report, she has remained focused on practical solutions to difficult problems—solutions that make sense even if they are a little ahead of their time. Recently she proposed that the North Carolina Legislature grant immunity from civil liability to those physicians who volunteer their time to serve in public clinics—a policy that would allow and probably attract retired physicians into the opportunity to serve as she has served.

—Eugene A. Stead, Jr., M.D., Editor
and Robert A. Gutman, M.D.

this dose. Following admission to hospital, Dr. Webb had him return to the office at 6 to 10 day intervals for four months and at least every six months thereafter. Each visit is documented very clearly and shows attention to all aspects of the patient's health including growth charting, care of upper respiratory infections, documentation of feeding problems, re-examination of the urine, measurement of urinary pH (always "alkaline"), and provision of vaccinations. His inability to concentrate his urine and the consequent need for supplemental and frequent fluid intake dominate much of the concern she showed for him. She gradually increased the dose of molar lactate in an effort to maintain the serum bicarbonate in the normal range. However, all but one value recorded were below 20 mEq/l. He remained on the 10th percentile of weight through his sixth month. His height was initially above the 90th percentile but fell to the 50th percentile at nine months and then to the 20th percentile before he was two years old, perhaps in relation to the initial difficulty in controlling the degree of acidosis. He passed urinary stones at age 31 months and again at age three and a half years. One stone was said to be magnesium ammonium phosphate and the other calcium oxalate dihydrate. Serum potassium values were recorded only three times in the first 16 months of his life and all were normal (29 days, 4.6 mEq/l; 4 months, 5.0 mEq/l; 16 months, 4.3 mEq/l). However, at six and three-quarter years of age, his serum potassium was 3.2 mEq/l during routine examination.

Eleven months later he required admission for severe acidosis following a mistake in the formulation of his lactate supplement; he had been taking $^1/_6$ molar lactate rather than the intended molar lactate. Hypokalemia (1.8 mEq/l), volume depletion and marked thirst were also present.

Later he was noted to have rather severe neurosensory hearing defect attributed to his episode of hypokalemia. He has continued to suffer from mild hearing deficit into his adult life. After this admission and the rest of his life, he has supplemented the molar lactate with potassium triplex. Rather than the now more commonly chosen form of potassium supplement, potassium chloride, this was a more appropriate choice for this patient because of the alkalinization properties of this mixture of citrate, acetate and bicarbonate anions. Despite the continued potassium supplementation, his serum potassium remained frankly low or low normal (no value above 3.8 mEq/l) through his twentieth year of life. By the

time he was three years old, he had reached the 75th percentile of height, and then surpassed this percentile by age nine. Throughout his adolescence, he maintained the 75th to 90th percentile for weight and height respectively. Today, he is six feet tall and weighs over 220 lbs. He continues to take exactly the same medicine that Dr. Webb prescribed; 60 mEq of sodium lactate and approximately 20 mEq of potassium triplex every day. He feels well, has married and has one child unaffected by this problem. He continues to be unable to concentrate his urine. Recently we tried to simplify his potassium supplementation only to cause severe hypokalemia (concentration of 1.9 mEq/l) and severe weakness. Upon return to Dr. Webb's prescribed regimen, his clinical and biochemical status returned to normal. He continues to pass small stones from time to time even now. Abdominal radiography shows persistent nephrocalcinosis.



photo courtesy of the *Durham Morning Herald*

Dr. Bailey Webb and a young patient.

Discussion

We wish to emphasize in this report the value of a sound understanding of biochemistry and human pathophysiology even where published experience is not yet available. Dr. Webb, with guidance from Dr. Hartmann, devised a program of medical management which from the beginning was intended to yield normal growth and development of her patient. Her therapy was started in 1953. Not until 1978 when McSherry and Morris[2] reported "attainment and maintenance of normal stature with alkali therapy in infants and children with classic renal tubular acidosis" was it known from the published literature that such therapy would allow growth. Indeed in 1972, Nash et al[3] suggested that growth of such children was limited even when adequate alkali therapy was employed. In the later McSherry and Morris report[2] of improved growth rates of ten infants and children, the longest follow-up was nine years and the treatment of that child was started 14 years after Dr. Webb began treatment of this patient.

The precise form of renal tubular acidosis in this patient cannot be elucidated in the modern framework, but Dr. Webb's early notes allow a reasonable judgment.

By definition, patients with renal tubular acidosis are those who, despite normal or nearly normal filtration rates, are unable to excrete hydrogen ions (protons) sufficient for metabolic needs. All patients with clinical evidence of RTA are characterized by the simultaneous presence, in steady state, of low serum bicarbonate concentration and a normal "anion gap" (the arithmetic difference between the sum of the concentrations of chloride and bicarbonate, and the concentration of sodium); and where there is no extra-renal loss of bicarbonate or ingestion of chloride acid (e.g., ammonium chloride). The failure of hydrogen ion excretion may be manifested as an acidification defect, but at least one group of patients with RTA are able under certain conditions to reduce urinary pH to normal levels.

Dr. Webb's patient does not seem to have characteristics which satisfy completely the classic descriptions of either of the two best known forms of RTA. The first of these, the classic RTA or type I may be hereditary or sporadic. In addition to the presence of a normal anion gap acidosis, these patients are unable to lower urinary pH to 5.4 or less regardless of the severity of systemic metabolic acidosis. The failure of acidification is known to be caused by failure of distal tubular epithelium to generate or maintain a hydrogen ion concentration gradient. Thus, although a substantial amount of filtered bicarbonate is absorbed in the proximal tubule, the hydrogen ion concentration fails to reach the levels that ordinarily allow full use of the urinary buffers, principally secreted ammonia and filtered phosphate and creatinine.

Patients with this disorder may be further divided on the basis of the renal handling of potassium. We will consider only type IA, in which hypokalemia and potassium wasting are manifest. The

potassium wastage is not well understood but has been partially explained by the elevated serum aldosterone found in such patients; and by the tendency to waste sodium from the normal proximal tubular resorption sites. Presentation of large amounts of sodium to distal tubular epithelium, especially in the presence of aldosterone, will enhance potassium secretion. Untreated acidosis appears to increase the potassium loss. This mechanism may account for the severe hypokalemia this patient experienced when the lactate dose was inadvertently reduced. These patients characteristically have nephrocalcinosis as did this patient since birth. This peculiar form of parenchymal stone formation appears to be the consequence of reduced urinary citrate. The hypothesis is that filtered citrate is more rapidly absorbed from the proximal tubule in an effort to recapture metabolizable salts of organic acid for bicarbonate regeneration. The other form of type I RTA, which is associated with hyperkalemia, will not be discussed here. This patient cannot be said to have classic low gradient, type IA RTA because, while such individuals cannot acidify their urine, they usually have normal or even enhanced proximal tubular resorption of filtered bicarbonate. Characteristically, when such patients remain untreated, serum bicarbonate seldom falls below 15 mEq/l.

On the other hand, those patients with any of the many forms of proximal RTA (type II) have, by definition, a defect of proximal bicarbonate resorption. As the proximal tubules are responsible for the majority of salvaged and regenerated bicarbonate, a defect of this mechanism leads usually to the most severe forms of RTA. Nevertheless, it is these patients who are able to acidify their urine, inasmuch as the gradient can be established, by the functioning distal tubules when serum and filtered bicarbonate is low enough to allow the defective proximal tubule to absorb most of the filtered bicarbonate, thus avoiding flooding the more distal epithelium with unreclaimed bicarbonate. These patients when left untreated, or treated inadequately, will be able to lower the urinary pH. Apparently, this patient never had an acid urine even during episodes of severe acidemia. Moreover, proximal renal tubular acidosis is not usually accompanied by nephrocalcinosis.

Thus this patient had features of both type IA and type II RTA, a phenomenon which was well described years after he was started on therapy.[4] They called this array of features type III RTA. Specifically, these children waste bicarbonate rapidly but even at low serum bicarbonate concentrations are unable to acidify the urine. Moreover, severe potassium wastage is characteristic and may even be partly responsible for the defects. Other more detailed testing of the functional capacity of the children's kidneys to concentrate urine and the response to phosphate or bicarbonate infusion serves to increase the certainty of the diagnoses.

Even though the definitive papers on such patients were not written until years after the patient was born and started on treatment, Dr. Webb's prescriptions were correct. Although, he still has nephrocalcinosis and the mild hearing impairment he acquired during the episode of acidosis-induced hypokalemia in 1961, he is healthy, normotensive, has normal renal function and maintains normal serum electrolyte concentrations. Dr. Webb's early treatment selection was the consequence of a prepared mind and a willingness to go beyond conventional practice of the time. No doubt, she was aided by her background in biochemistry and the influence of Dr. Hartmann. She devised the treatment based on this knowledge and on very intense follow-up and observation, She showed strong intuitive understanding of the general nature of the problem long before detailed descriptions were available in the literature. Consequently her patient may well be the longest term successfully treated child with severe RTA in the world. Certainly we have found no other patient in the literature who was started on successful treatment as early as he was. ❑

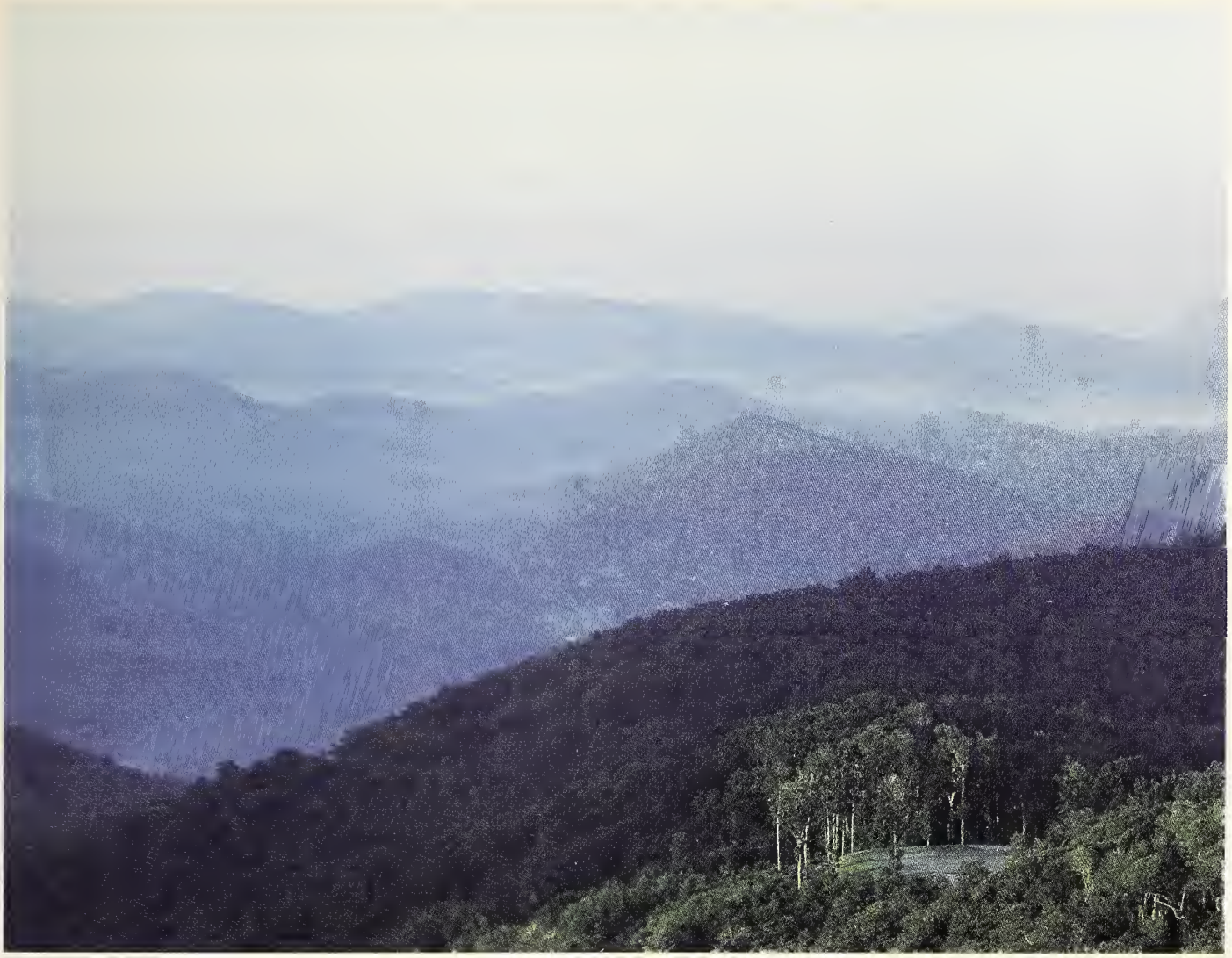
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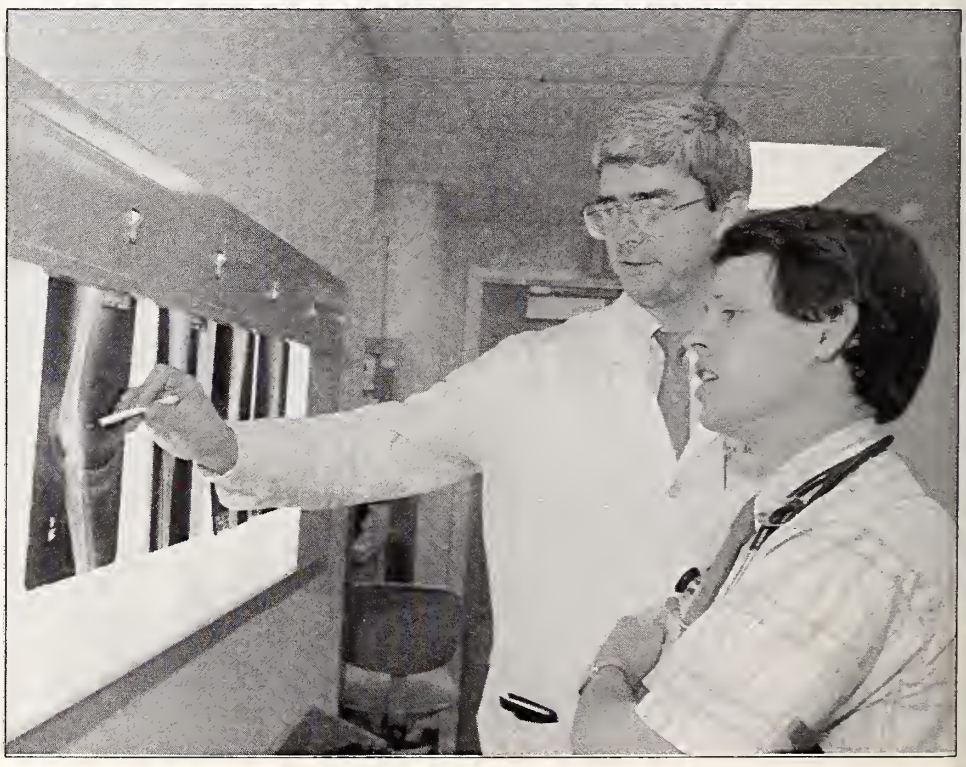
Centers may be the way of the future:

The stories of two distinguished arthritis centers that have developed in the heart of North Carolina

Arthritis continues to be a serious health problem in the United States affecting more than 40 million Americans. The state of North Carolina is fortunate to have two of the best arthritis centers in the country with units at The University of North Carolina at Chapel Hill and at Duke University in Durham. Located only 15 miles apart, the two Arthritis centers work together on collaborative projects, programs and goals.

The two units have developed synergistically such that together they form the finest resource for immune-mediated disease research and treatment in the country.

These two articles from the Directors—Dr. Barton F. Haynes at Duke and Dr. John B. Winfield at UNC—serve as an introduction to the programs of the Duke University and The University of North Carolina Arthritis Centers.



Patient care in the Duke University Arthritis Center's Rheumatology Clinic. Dr. Rex McCallum, Chief of the DUAC Clinical Service discussing a patient's x-ray with Duke resident, Dr. Russell Hillsley.

The Duke University Arthritis Center

Barton F. Haynes, M.D.

The Division of Rheumatology and Immunology at Duke has a long and distinguished history of contributions to advances in rheumatology through clinical and basic research. The first rheumatologist at Duke was Dr. Elbert Persons who joined the Duke faculty in July, 1930, and for 25 years was one of the very few physicians in North Carolina with a particular interest in rheumatic diseases.

In 1956, the Division of Rheumatic and Genetic diseases was organized, and Dr. James B. Wyngaarden became division chief in 1960. When Dr. Wyngaarden became chief of Medicine at the University of Pennsylvania in 1965, he was succeeded by Dr. Grace Kerby. Dr. Kerby was succeeded by Dr. William Kelley in 1968, and when Dr. Kelley left Duke in 1975 to become chief of Medicine at the University of Michigan, Dr. Ralph Snyderman became chief of the division, and the division's name changed to the Division of Rheumatology and Immunology to reflect the increasing importance of the immune system in all inflammatory diseases.

Dr. Snyderman left Duke temporarily in 1986, and returned to Duke in 1989 to become Chancellor for Health Affairs and Dean of the Medical Center. In 1986 Dr. Snyderman was succeeded by myself as chief of the rheumatology division. In 1989, Dr. Ralph Snyderman created the Duke University Arthritis Center (DUAC) and I was named as the first director.

Since 1930, there have been numerous achievements and breakthroughs made at Duke in the study of rheumatics and immune related diseases. Many of these achievements are listed in table 1 (next page). They include the first clinical trial in the development of allopurinol for the treatment of gout, the evaluation of methotrexate for the treatment of rheumatoid arthritis, description of metabolic defects in gout, development of treatment regimens for forms of vasculitis, discovery of the ways in which human retroviruses cause disease, and the development of prototypic vaccines for the human retroviruses, human T cell lymphotropic virus, type I (HTLV-I) and the human immunodeficiency virus (HIV). With the creation of the Duke University Arthritis Center, Duke Rheumatology has entered a new era of development with the goal of discovering new cures and treatment regimens for difficult-to-treat rheumatic diseases. Currently, the staff of the Duke University Arthritis Center provides Clinical service to Duke University Hospital (1,100 beds), the Durham Veteran's Administration Hospital (400 beds) and to ten outreach rheumatology clinics throughout the state.

What follows is an outline of the current facilities and programs available at Duke within the Duke University Arthritis Center.

Dr. Haynes is Chief, Division of Rheumatology and Immunology, and Director, Duke University Arthritis Center, Duke University Medical Center, Durham 27710.

The Duke University Arthritis Center Comprehensive Clinics

Headed by Dr. Rex M. McCallum, the DUAC comprehensive clinics are made up of (1) an Acute Care and Consult Clinic, (2) the General Rheumatology Clinic, and (3) Specialty Rheumatology Clinics. Appointments are now made for all clinics through the new rheumatology appointments office headed by Ms. Jeannie Murray (919/684-3956). The DUAC Comprehensive Clinics are housed in newly renovated space in the original Duke Hospital Building (Duke South) (figure 1) and see over 12,000 patient visits per year.

DUAC Acute Care Clinic—The Duke clinics were designed to provide accessible care to acutely ill patients as well as, evaluate patients from other Duke clinics within 24 hours of request. Appointments are available five days a week with staffing by a senior staff rheumatologist, a physician's assistant, and a registered nurse. Thus, when referral calls are made and received in the Rheumatology appointments office, a specific mechanism is in place to meet both patients and referring physicians' needs.

General Rheumatology Clinic. The general rheumatology clinic of DUAC is in session five days a week and is staffed by five full-time rheumatology senior physicians: Dr. Nancy B. Allen, Dr. David S. Caldwell, Dr. Rex M. McCallum, Dr. John R. Rice and Dr. E. William St. Clair.

In this clinic, patients with any type of autoimmune, inflammatory or immunologically mediated disease are evaluated, diagnosed and treated. Patients are seen as soon as possible, and reports sent back to the attending physician—usually within 10 days after a patient's visit. If the patient's clinical condition warrants more immediate communication with the referring physician, Duke rheumatologists are in contact by telephone or telecopier to convey the necessary information.

DUAC Subspecialty Clinics

The Inflammatory Eye Disease Clinic is led by Dr. Rex M. McCallum in the Division of Rheumatology and Dr. Glenn Jaffee in the Department of Ophthalmology at Duke. This clinic, which meets once a week in the Duke Eye Center, focuses on the diagnosis and treatment of autoimmune mediated inflammatory eye disease. Inflammatory eye disease occurs as part of rheumatoid arthritis, systemic lupus erythematosus, or forms of vasculitis, and can also occur as primary isolated disease. It is one of the most difficult complications of rheumatoid arthritis to treat.

At Duke, this clinic has been established by physicians who are experts in the treatment of inflammatory eye disease, and who are studying new ways to control eye inflammation. In addition, Duke physicians are the world leaders for diagnosis and treatment of a form of eye inflammation known as Cogan's syndrome. Eye disease patients are given comprehensive evaluation and care, and their medical and ophthalmologic management is coordinated through this central clinic.

The Duke Vasculitis Clinic is led by Dr. Nancy Allen. The term vasculitis comprises many different diseases that have in common the destruction of blood vessels by immune cells. Diseases evaluated in the vasculitis clinic and in the general rheumatology clinic include Wegener's granulomatosis, polyarteritis nodosa, temporal arteritis, and forms of small vessel vasculitis. Members of the Division of Rheumatology and Immunology at Duke have pioneered the use of immunosuppressive agents in the treatment of various forms of vasculitis, and have recently developed a newer form of treatment, Cyclosporine A, in the treatment of large vessel vasculitis.

The Sjogren's Syndrome Clinic was organized at Duke in 1989 by Dr. E. William St. Clair, who studies the pathogenesis and treatment of this disease. Sjogren's syndrome is an inflammatory condition of the secretory glands of the body, such as the salivary and lacrimal glands, leading to dry eyes (keratoconjunctivitis sicca) and dry mouth (xerostomia). This condition is associated with both benign and malignant B cell proliferation. It occurs in the context of other autoimmune diseases such as rheumatoid arthritis and systemic lupus erythematosus and can occur as a primary disease as well. Experts in oral pathology, ophthalmology and ENT specialties are brought together in this clinic to give the optimal care to patients with this difficult-to-treat autoimmune syndrome.

The Scleroderma and Retroperitoneal Fibrosis Clinic at Duke is led by Dr. Gary Gilkeson. Both scleroderma and retroperitoneal fibrosis are immune-related diseases in which too much connective tissue is made—leading to serious compromise of organ function. In the case of scleroderma, increased connective tissue underneath the skin and in other areas of the body prevents normal movement and alters kidney function. The causes of these diseases are obscure, and investigators at Duke are studying the causes of these diseases and developing new therapies. For example, Duke investigators are investigating a new drug produced by recombinant DNA technology, called gamma-interferon, that shows hope for the treatment of scleroderma.

The Duke Pediatric Rheumatology Clinic is directed by Dr. Deborah Kredich, who also is the current president

Table 1
Duke Firsts in Rheumatology and Clinical Immunology

First clinical trials in the development of Allopurinol for the treatment of gout.
Early clinical trials in the use of 6-mercaptopurine and other immunosuppressive drugs in many diseases.
Description of metabolic defects in gout and other diseases of purine metabolism.
First treatment of an enzyme deficiency disease with a purified enzyme (ADA deficiency).
Development of treatment regimens for autoimmune hearing loss (Cogan's syndrome).
Development of treatment regimens for large vessel vasculitis syndromes.
Description of the arthritis-vasculitis syndrome associated with HTLV-I infection.
Description of mechanisms of chemotaxis of mononuclear and polymorphonuclear phagocytes.
Discovery of mechanisms of how the AIDS virus and the Human T Cell Lymphotropic Virus Type 1 interacts with T cells.
Development of prototype synthetic vaccines for HTLV-I and AIDS
First cloning and isolation of the genes that encode the autoantigens in systemic lupus erythematosus and Sjogren's syndrome.
Development of diagnostic tests for rheumatic diseases using recombinant autoantigen proteins.
First definitive clinical studies demonstrating the efficacy of methotrexate in the treatment of rheumatoid arthritis.
First clinical trials of gamma-interferon in scleroderma.
Development of effective treatment protocols for chronic pain syndromes in rheumatoid arthritis and osteoarthritis.

of the Pediatric American Rheumatology Society. Arthritis can occur in children as well as in adults, and some estimates have suggested that there are over 200,000 children in the United States with the juvenile or pediatric form of rheumatoid arthritis. Other types of autoimmune diseases also affect children as well as adults, thus necessitating the need for pediatricians skilled in the care of children with rheumatologic diseases. At Duke, physicians in the pediatric rheumatology clinic see patients several days a week with various inflammatory and autoimmune diseases and offer comprehensive diagnostic and therapeutic care of these complicated conditions.

The Refractory Rheumatoid Arthritis Clinic at Duke grew out of the need for specialized care often required for patients with severe or refractory cases of rheumatoid arthritis (RA). While many cases of RA can be treated successfully with anti-inflammatory drugs, other cases are more recalcitrant, and a cure for RA has remained elusive. This clinic, headed by Drs. John R. Rice and David Caldwell, evaluate difficult-to-treat RA patients and have state-of-the-art clinical protocols to offer otherwise refractory patients with RA. Examples of protocols under development or already in use are monoclonal antibody-toxin conjugates to be used as new immunosuppressant drugs and clinical trials of cyclosporin A in the treatment of RA.

Chronic Arthritis Pain Clinic. Chronic pain in arthritis patients is a major problem, particularly in the context of artificial joint replacement. In the Chronic Arthritis Pain Clinic, Drs. Frank Keefe in the Department of Psychiatry and David Caldwell in Rheumatology have pioneered the development of psychological techniques that significantly improve chronic pain states in arthritis patients. Using relaxation techniques, behavior and thought modification and other strategies, Keefe and Caldwell provide scientifically validated novel therapies to DUAC arthritis patients in this clinic.

The Duke Orthopaedic Clinics, newly renovated, are headed by Dr. James Urbaniak and are staffed by 14 orthopaedic surgeons, each with an area of subspecialty, many of which relate to various types of arthritic problems. Joint reconstruction or arthroplasty is one of the subspecialties, and this team has performed more than 5,000 hip and knee implants during the past 20 years. Duke specialists in upper extremity surgery have performed similar types of joint replacement in the shoulder, elbow, wrist, and small joints of the hand.

When possible, the orthopaedic team endeavors to salvage the patient's major joints by reconstruction procedures rather than implanting prosthetic devices. For example, a patient's hip or knee pain may be relieved and its range of motion improved by performing various types of angular changes about the hip or knee (osteotomy) rather than inserting an artificial implant.

In addition, Duke orthopaedic surgeons specializing in microvascular surgery have performed nearly 300 operations on the hip joint with avascular necrosis (bone death) secondary to various types of diseases. In most cases, bone-grafting with microvascular reconstruction can reestablish blood flow, strength and contour to a previously necrotic hip. Additional expertise is available for soft tissue reconstruction in arthritic hands and feet in the earlier stages of arthritis to prevent destructive changes that later require implants or prosthetic devices.

The Duke Sports Medicine Clinic. Duke's team of sports medicine orthopaedic surgeons are as enthusiastic about treating the weekend or older athlete afflicted by overuse injuries as they are about caring for Duke's collegiate and world-class athletes. Located in the Wallace Wade Stadium in the Duke Preventive Cardiology Clinic (DUPAC), the Duke Sports Medicine Clinic is headed by Dr. William Garrett.

Coordinated Clinical Services by the DUAC Comprehensive Arthritis Clinic. In all of the clinics described above, coordinated services are available to bring together input from many sources necessary for the complete care of the rheumatologic/orthopaedic/immune disease patient. These other sources include physical therapy, rehabilitation therapy, prosthetic device development, and psychiatric services.

DUAC Clinical Immunologic Laboratory. The clinical immunology laboratory of DUAC is housed in renovated space in the original Duke Hospital building. Laboratory directors are Dr. E. William St. Clair and Dr. David S. Pisetsky. With Dr. Vicki Christenson, this laboratory provides services to Duke and the surrounding community with an extensive array of diagnostic testing applicable to immune and inflammatory diseases.

Consultation is available to referring physicians outside of Duke from Drs. St. Clair, Pisetsky and Christenson regarding laboratory diagnosis of rheumatologic patients. In addition, new tests are continually being evaluated and developed for clinical application.

DUAC North Carolina Rheumatology Outreach Clinics. In addition to staffing Duke Clinics, staff and fellows in DUAC visit outreach rheumatology clinics throughout the state and provide clinical services on site. Current sites include: Rocky Mount, Danville, Va., Concord, Roxboro, Reidsville Fayetteville, Louisberg, Henderson, Lumberton, and Oxford.

DUAC Inpatient Hospital Services. Along with DUAC outpatient services, DUAC has its own specialty inpatient unit, Hanes Ward, located in the original Duke Hospital. This unit has rooms specially designed for comfort of arthritic and disabled patients and is staffed by a nursing and physician team trained to care for rheumatologic patients. For patients on DUAC research protocols, Duke has the oldest and one of the largest National Institutes of Health-sponsored Clinical Research Units. This is a fully staffed ward dedicated to clinical research in which patients can be admitted, and have the opportunity to receive new treatments for arthritis or other inflammatory diseases.

DUAC Education and Training Programs

Continuing education of patients, physicians-in-training and practicing physicians in the community is a major commitment and goal of the DUAC.

Patient Education. Throughout all of the DUAC clinics, programs have been developed to educate patients about the best ways to care for their disease. The DUAC information service has been established to facilitate the delivery of patient information. The Arthritis Center publishes a quarterly newsletter containing information on new research and available patient services at DUAC. Specific Duke-based patient education programs are available for patients with chronic pain syndromes, inflammatory eye disease, Sjogren's syndrome and forms of vasculitis.

DUAC Rheumatology and Immunology Fellowship Training Programs. Duke has one of the largest physician training programs in the country with slots for 15 fellows—12 in adult rheumatology and three in pediatric rheumatology. Trainees participate in a comprehensive three-year program comprised of one year of full-time clinical training and two years of basic research.

The clinical specialty of rheumatology is heavily based in basic science knowledge such that the evaluation of a patient with rheumatologic disease requires a thorough understanding of immunology and cell biology. With the current explosion in recombinant DNA technology that is leading to new treatment strategies for the inflammatory diseases using recombinantly derived mediators of the immune system (such as gamma-interferon), rheumatologists need to be soundly versed in basic immunology and cell biology. To this end, the training program at Duke is committed to training outstanding clinicians and physician-scientists to meet the needs of North Carolina in the future.

Continuing Medical Education for North Carolina Physicians. Each year, the DUAC sponsors many events and programs targeted at providing medical education services to North Carolina physicians. DUAC provides bound volumes of the weekly rheumatology conferences to members of the North Carolina Rheumatology Association in practice around the state, and provides Continuing Medical Education credit to practicing physicians who attend DUAC Thursday afternoon grand rounds.

Each spring, DUAC sponsors a national state-of-the-art symposium on an aspect of rheumatology and immunology of current interest—held in the Searle Center on the Duke campus. Additional clinical conferences, guest lecturers and symposia are held throughout the year for continuing education for both Duke and private practice physicians.

Next fall, DUAC, with the Duke Eye Center, is sponsoring a fall symposium at the Washington Duke Hotel in Durham on clinical aspects of rheumatologic inflammatory eye disease. In the Spring of 1992, DUAC will jointly sponsor with The University of North Carolina Arthritis Center a national clinical symposium on "Advances in Diagnosis and Treatment of Rheumatic Diseases."

Duke University Arthritis Center Research Programs

DUAC Clinical Research. Many of the ongoing clinical research protocols and areas of research interest have been highlighted above. In addition to these programs, DUAC is currently establishing a comprehensive computer facility and database to interface with our clinical service and clinics, to serve our quality assurance and recertification programs for Duke physicians, and to serve as a data base for clinical research for rheumatic and immunologic diseases. Duke researchers are renowned for their roles in development of new treatment strategies for immunologic diseases (see table 1) and through DUAC, investigators at Duke are committed to continue to search for new and more efficacious ways of treating immunologic diseases.

DUAC Basic Research. Originally established by Dr. James B. Wyngaarden in 1956, the Duke rheumatology research unit continues to be at the forefront of basic rheumatologic research. In 1987, Duke was chosen to be one of three national centers funded by the National Institutes of Health to conduct basic yet targeted research on the pathogenesis and treatment of rheumatoid arthritis. This $3,000,000 grant for development of a Specialized Center of Research (SCOR) in Rheumatoid Arthritis at Duke was the result of Duke's bringing together world-class investigators who are experts in many fields, and establishing a focused group of investigators, committed to discovering the cause and cure for immune-mediated diseases, using rheumatoid arthritis as a paradigm. To date this work has been highly successful, and has led to new insights into the pathogenesis of RA and to the creation of new treatment strategies that are under development by DUAC.

In addition to work targeted specifically at RA, DUAC has over 20 outstanding scientists working on the basic science aspects of vasculitic diseases (such as polyarteritis nodosa and Wegener's granulomatosis), Sjogren's syndrome, AIDS, autoimmune skin diseases (such as pemphigus and psoriasis), systemic lupus erythematosus, immune deficiency diseases, inflammatory eye disease, autoimmune hearing loss, as well as other diseases related to immune dysfunction.

Summary

The Duke University Arthritis Center has brought together both clinicians and basic scientists into a common structure to achieve a singular goal—that of improving the health and welfare of patients with immune-mediated diseases in North Carolina and surrounding states. The structure of DUAC allows new insights

gained by basic immunologic research to be rapidly applied to clinical rheumatologic diseases by channelling basic information to the clinical investigative unit in DUAC. Here new treatment strategies are developed and tested and made available to patients when they are judged to be both safe and efficacious. In the DUAC comprehensive clinics, the best treatments available to patients with rheumatologic diseases are provided in a setting designed to be user-friendly to patients and comprehensive in services offered. ❑

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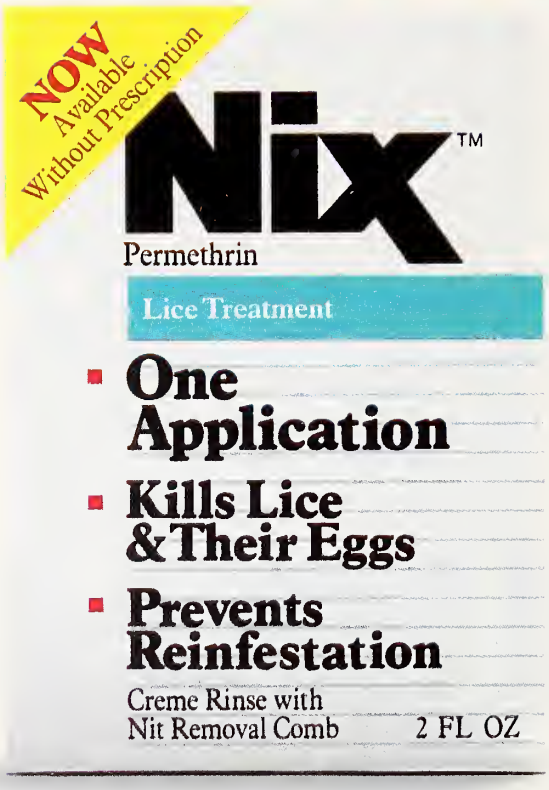


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The University of North Carolina Arthritis Center

John B. Winfield, M.D.

The first bona fide specialist in rheumatology and immunology at The University of North Carolina - Chapel Hill was Dr. William J. Yount, who joined the faculty of the Department of Medicine as Division Chief in 1970. Dr. Yount was well-trained—five years of residency at the Massachusetts General Hospital in Boston and five more years of research experience at the Rockefeller Institute of Medical Research in New York—and he developed, single-handedly, a research program, a consulting service in rheumatology and clinical immunology, a fellowship training program in rheumatology, the Arthritis and Allergy Clinics, and the clinical immunology and immunochemistry laboratories (which are now run by two PhDs and a flock of technicians). He also served as North Carolina Memorial Hospital's immunopathologist. Dr. Yount currently is the senior member of the Division of Rheumatology and Immunology and exemplifies the outstanding clinical role model with whom medical students and house officers interact all too infrequently today.

Dr. Winfield is Herman and Louise Smith Professor of Medicine, Chief, Division of Rheumatology and Immunology, and Director, Thurston Arthritis Research Center, Chapel Hill 27599.

As present Division Chief, I moved to Chapel Hill from the University of Virginia in 1978. During the ensuing 12 years, the arthritis and immunology program evolved rather remarkably and, together with the program at Duke, now constitutes an outstanding and comprehensive resource for patients with arthritis and immunologic disorders in North Carolina and their physicians.

The UNC-CH program was chartered as the University of North Carolina Arthritis Center in 1981 and received core funding from the National Institutes of Health in 1982. Designated a Multipurpose Arthritis Center (MAC) by the NIH, it is one of only two such centers south of Connecticut (the other is at the University of Alabama-Birmingham).

In 1985, the UNC-CH program became one of four Arthritis Biomedical Research Centers funded by the Arthritis Foundation. Groundbreaking for the Doc J. Thurston, Jr. Arthritis Research Center building was held on October 26,1990. This magnificent new structure (figure 1) is the product of the generosity and foresight of Mr. Thurston of Charlotte and scores of other citizens of North Carolina, and will enable the many elements of the current Arthritis Center to give up their trailers and rented space for a home together under one roof. Faculty associated with the Center, which now total more than fifty, represent disciplines extending from anthropology to sports medicine. In addition to the entire spectrum of clinical services in adult and pediatric rheumatology, orthopaedics, allergy and clinical immunology, the Center conducts research and training programs in molecular biology and immunology, clinical investigation, computer applications in medicine, epidemiology, health education, health services research, health promotion/disease prevention, rural health, and social and behavioral research, to name a few. UNC-CH receives generous support from the state, and, in accordance with a guiding principle of the University, the Arthritis Center is philosophically committed to return more than it receives to the people of North Carolina. Examples include its involvement in the Area Health Education Centers, the State Arthritis Program, the Arthritis Rehabilitation in Industry Project (performed collaboratively with Burlington Industries), and the Johnston County Rural Health Research Center in Smithfield. Special efforts are being made to foster the development of the young arthritis program at East Carolina University as well.

UNC-CH Clinical Programs in Rheumatology

1 Adult Rheumatology. General rheumatology clinics staffed by seven Attending Rheumatologists (Drs. Robert Berger, Phil Cohen, Robert Eisenberg, Nortin Hadler, Suzanne Sauter, John Winfield, and William Yount) are held

five days each week in the J. Spencer Love Outpatient Clinic at North Carolina Memorial Hospital. Appointments are scheduled and coordinated by Mrs. Tish Black (966-4191) in the Division of Rheumatology and Immunology office. These clinics work closely with the Rheumatology Consulting Service in order to provide immediate consultations and acute care for all in-patients and outpatients. Carolina Arthritis and Allergy Associates (CAAA), staffed by Drs. Berger, Winfield, and Yount, was formed in the summer of 1989 as a satellite arthritis and allergy practice in a convenient Chapel Hill setting removed from UNC Hospitals. An expanded CAAA, together with faculty in the Division of Orthopaedics, will occupy a specialized module devoted to arthritis and related musculoskeletal problems in the new UNC Ambulatory Care Facility when it is completed in 1992.

The Lupus Clinic, a specialty clinic devoted to comprehensive evaluation and care of patients with systemic lupus erythematosus (SLE) and related disorders, reflects the long-standing interest of the Division of Rheumatology and Immunology in systemic autoimmune diseases. More than 200 patients with SLE from North Carolina, Virginia, and South Carolina are being followed at the present time. In conjunction with Dr. Ronald Falk (Nephrology Division) and Dr. Charles Jennette, an immunopathologist, state-of-the-art protocols for treatment of lupus glomerulonephritis are being carried out (e.g., bolus cyclophosphamide, anti-DNA antibody tolerance induction).

Optimum diagnosis and care of patients with rheumatologic diseases frequently require sophisticated laboratory, radiologic, and imaging support together with a team approach that utilizes the expertise of other medical specialists and allied health professionals. Some of the extensive resources that can be brought to bear in this regard are listed in table 1 (next page). Foremost among these are the faculty of the Division of Orthopaedics, directed by Dr. Frank Wilson. The Orthopaedics faculty enjoy a national reputation in their respective fields of interest: joint replacement (Drs. Frank Wilson and Paul Lachiewicz); hand and foot surgery, microsurgery (Dr. Paul Bynum); pediatric orthopaedics (Drs. Walter Greene and Richard Henderson); spine disorders (Dr. Paul Suh); and sports medicine (Drs. Tim Taft and Louis Almekinders). In addition to General Orthopaedics Clinics, weekly specialty clinics include Hand and Foot Clinics, a Scoliosis Clinic, a Hemophilia Clinic, and four Sports Medicine Clinics. A combined Orthopaedics/Rheumatology conference to discuss particularly challenging cases is held monthly. Senior orthopaedists spend two months full-time in the rheumatology clinics and on the rheumatology consulting service. Specialized care for patients with arthritis will be enhanced further when orthopaedics and rheumatology faculty, together with relevant nursing and allied health professionals, occupy a specially-designed Arthritis Module in the new Ambulatory Care Facility.



Figure 1. Elevation of the Thurston Building, which will house the Doc J. Thurston, Jr. Arthritis Research Center. Construction will be completed in early 1993.

2 Pediatric Rheumatology. The Pediatric Rheumatology/Immunology Division has grown to become a multifaceted division dedicated to patient care, education, training, clinical research and basic research. In a unique collaborative accomplishment, the Duke University and UNC Pediatric Rheumatology Divisions have developed a Combined Pediatric Rheumatology Program in order to provide the most comprehensive patient care and fulfill goals of its multiple program areas. There are currently four Attending Pediatric Rheumatologists on staff (Drs. Kathy Amoroso, Deborah Kredich, Ann Reed and Leonard Stein). Inpatient services, outpatient clinics and outreach programs have been established. Clinical interests range from JRA, Systemic Lupus Erythematosus, Kawasaki Disease and Dermatomyositis to less common illnesses such as fibromyalgia. Clinic appointments at UNC-CH can be scheduled through the Pediatric Rheumatology/Immunology office (966-1164).

3 Outreach. Clinical outreach began at UNC-CH in 1952 when the Orthopaedic Service instituted a State Crippled Children's Clinic in Chapel Hill. Crippled Children's Clinics soon were established in Elizabeth City, Tarboro, and Jacksonville. In 1972, the highly successful Area Health Education Centers (AHEC) program was established around the State through the efforts and vision of Dr. Christopher Fordham. The AHECs provided a natural framework for further extension of UNC-CH arthritis services in North Carolina without impinging on or competing with the practice of medicine in the private sector. The Rheumatology Division developed teaching and

consultation clinics in Wilson, Raleigh, and Wilmington, which are now staffed by private rheumatologists who were recruited to these areas. Three years ago, the Central Carolina Hospital in Sanford requested the Rheumatology Division to staff an arthritis clinic in that community. In addition to providing rheumatologic services to patients and physicians in Sanford, the relationships established by this endeavor should enhance the capacity of Sanford to recruit its own rheumatologist.

Arthritis Health Promotion/Disease Prevention for the People of North Carolina

The UNC-CH Arthritis Center interacts significantly with state agencies and voluntary health organizations interested in arthritis and chronic disease, including the North Carolina Arthritis Program (established in July, 1979 through enactment of House Bill 999 by the General Assembly), the Arthritis foundation, and local arthritis self help groups. Thirteen community research projects bearing directly on arthritis in North Carolina were completed during the years 1982-88. The Wilson Community Arthritis Program (Dr. S. Sauter) was designed to "export" to a rural town the more sophisticated comprehensive care delivered in a university hospital setting. The Arthritis Rehabilitation in Industry project (Drs. K. Mitchell, R. Sakata, and J.B. Winfield) stands as a prototype for assessment of the problem of arthritis in the workplace and for development of intervention mechanisms. CACE (Community-based Arthritis Continuing Education for Occupational and Physical Therapists; Drs. R.F. DeVellis and H.L. Cook) was a short, highly effective, community-based education project for allied health professionals. Children's and Mothers' Perceptions of Juvenile Rheumatoid Arthritis and Children's Adjustment (Susan T. Ennett and Dr. B. DeVellis) highlighted the importance of cross-validating parental reports with child reports and suggested that variables, such as how JRA is interpreted by children, need to be considered along with disease severity in predicting adaptation. Self-Evaluation of Functioning Among Individuals with Rheumatoid Arthritis (Drs. Sue Blalock, Brenda DeVellis, and Robert DeVellis) helped to gain a better understanding of factors that influence adjustment to rheumatoid arthritis (RA).

Table 1
Specialized services for diagnosis and care of patients with rheumatologic disorders.

Service	Personnel
Bone and joint Radiology	Dr. J. Renner, Director (Radiology)
Clinical Immunology Laboratory	Dr. J. Folds (Dept. Hospital Laboratories)
Immunologic Skin Diseases	Dr. W.R. Gammon (Dermatology)
Inflammatory Bowel Disease	Dr. J. Sessions (Gastroenterology)
Inflammatory Myopathy/Neuropathy	Drs. C. Hall and J.H. Howard, Jr. (Neurology)
Metabolic Bone Disease	Dr. T.K. Gray (Endocrinology)
Occupational therapy (Arthritis)	Ms. Ann Smith
Orthopaedic division	Dr. Frank Wilson and Staff
Pain Clinic	Dr. J. Ghia (Anesthesiology)
Peripheral Vascular Laboratory	Dr. Steven Burnham
Physical Therapy (Arthritis)	Ms. Ruth Stansberry
Prosthetics and Orthotics	Mr. Joe Ferguson, CPO
Pulmonary Fibrosis/Sarcoidosis	Dr. J. Donohue (Pulmonary Medicine)
Rehabilitation Unit	Dr. S. Sauter, Director
Rehabilitation Clinic	Dr. Sauter
Social work (Arthritis)	Ms. Mary Hoover
TMJ Disorders, Facial and Myofascial Pain	Drs. J. Zuniga and G. Greco (Dentistry)
Uveitis, Sicca Syndromes, Sarcoidosis	Dr. K. Cohen (Ophthalmology)

Current investigations also show promise for lessening the impact of arthritis in North Carolina. For example, Nutritional Determinants of Rheumatoid Arthritis (T. Wilcosky, Ph.D. and Neil Simonsen, Doctoral Candidate in the Department of Nutrition, UNC School of Public Health) is investigating the role of dietary fatty acids in RA and the potential role of antioxidants. Adjustment to Rheumatoid Arthritis: The Role of Self-Evaluation Processes (Drs. S. Blalock, B. DeVellis, R. DeVellis, and S. Sauter) focuses on the processes through which individuals with RA evaluate their physical abilities and their ability to control pain. This project is testing a casual model in which self-evaluation processes mediate the relationship between disease severity and psychological well-being, functioning, and pain coping strategies, and hopes to derive self-evaluation strategies that are associated with better illness adjustment. The long-term aim of A Research Model for Health Promotion and Disease Prevention in a Rural Southern Community (Drs. H. Cook, J. Fryer, J. Jordan, J. McClelland, R. Riportella-Muller, and M. Salmon) is to identify the best approaches for attaining health promotion, disease prevention (HPDP), and disability prevention in rural areas. This project is being carried out in Johnston County, NC, a predominantly rural area with a substantial percentage of minority residents, older adults, lower income households, and individuals with limited education. Its overall goal is to build a body of empirical knowledge concerning approaches and methods that are appropriate and effective for rural Southern populations in the areas of arthritis, cancer, heart disease and injuries. Also just underway in Johnston County is An Inci-

dence Study of Osteoarthritis (Drs. J. Jordan and J. Fryer). This study, supported by the Centers for Disease Control, will first determine the prevalence of osteoarthritis (OA) of the knee and hip and then establish a prospective cohort to be followed for the development of radiographic OA of the knee and hip. In addition, the pathway from asymptomatic condition to symptomatic disease state will be defined, and a model for this disease course proposed. Multiple putative risk factors, including medical and metabolic conditions, demographic factors, occupational factors, and psychosocial determinants will be examined, as well. Exercise and Joint Protection Behaviors: Development of a Measure to Assess Lifestyle Integration (Dr. S. Blalock) is developing a measure to assess the degree to which exercise and joint protection behaviors have been integrated into an individual's lifestyle.

Clinical and Laboratory Investigation of Arthritis and Autoimmunity

In addition to ongoing trials of new therapies for arthritis and its concomitants—for example, a trial to test the efficacy of a biphosphonate compound to retard or prevent the development of osteopenia in patients receiving corticosteroids—the Research Component of the Center conducts an array of basic laboratory investigations into the etiology and pathogenesis of inflammatory arthritis and systemic autoimmune disease. Currently active research areas include: autoantibodies in SLE; role of stress proteins in autoimmunity; proteoglycan structure and function in osteoarthritis; antibody V gene usage in the normal immune response and in autoantibody formation; mechanisms of autoimmunity in lpr mice; the structure and function of major histocompatibility class I and class II molecules; cell biology and immunology of complement receptors; and experimental arthritis in rats. Collectively, these research projects are providing important new information concerning the bases by which common infectious organisms may trigger chronic arthritis, how histocompatibility and other genes confer susceptibility to certain common types of arthritis, and why the immune system becomes "dysregulated" in diseases such as systemic lupus erythematosus. Interesting insights into the molecular basis of osteoarthritis, the most common form of arthritis, have been obtained from Dr. Bruce Caterson's pioneering use of monoclonal antibodies to cartilage proteins and enzymes.

Pre-Doctoral and Post-Doctoral Fellowship Training in Rheumatology and Immunology

The thrust of the research training program is to provide a broad investigational experience in immunology and related disciplines basic to the study of the pathogenesis of rheumatic diseases. Although training of MD post-doctoral fellows who plan careers in academic rheumatology is emphasized, pre-doctoral candidates also can select faculty in the Division of Rheumatology and Immunology as mentors. The training program is largely preceptorial, with more than 75% of the trainee's time devoted to independent research activities in the laboratories of the faculty, who are drawn from the Division of Rheumatology and Immunology, the Department of Microbiology and Immunology, the Thurston Arthritis Research Center, and the Program in Molecular Biology. Of 14 post-doctoral trainees, who completed training during the past five years, 10 hold faculty positions in medical schools or research institutes, one is a scientist in industry, and three are in private practice.

Clinical Education in Rheumatology

Traditional medical student and house staff educational experiences in rheumatology are complemented by ongoing investigations into such issues as trainee choice of rheumatology electives (identified the beliefs, attitudes and social factors that predispose medical students and residents to take clinical rheumatology electives), improved methods for educating and evaluating medical students in basic musculoskeletal examination skills, and use of laptop computers as educational tools in the out-patient clinic. This latter project is developing a tool kit of computer applications specifically designed to enhance medical student education in the management of rheumatological problems and to improve their skills in clinical reasoning. Continuing medical education for physicians in North Carolina is accomplished by frequent lectures and rounds by UNC-CH rheumatology faculty at AHEC sites and by state-of-the-art lectures and "meet the professor" luncheons during the annual Department of Medicine Internal Medicine symposium held each spring in Chapel Hill. The Carolina Consultation Center (1-800/862-6264 in North Carolina; 1-919/966-4005 outside North Carolina) enables immediate contact with rheumatologists and other specialists for referrals, telephone consultations, and office, clinic, and teaching schedules. In conjunction with the Duke Arthritis Center, a national clinical symposium on "Advances in Diagnosis and Treatment of Rheumatic Diseases" is planned for 1992.

Patient Education

Arthritis patient education is a potentially powerful and cost-effective element in our therapeutic armamentarium, but remains ill-understood and woefully under-utilized. The UNC-CH Arthritis Center has had a long-standing interest in this area and has contributed significantly to our present understanding of some of the psychosocial and behavioral factors that are essential for the design of more effective approaches to patient education. In addition to projects listed above, Social Comparisons among Patients with Arthritis (Dr. R. DeVellis) explored how interpersonal processes affect the psychological adjustment of patients to arthritis. Evaluation of Alternative Ap-

proaches of Arthritis Self-Management Education (Judith Cohen, M.P.H.) sought to assess the efficacy of the Arthritis Self Management Project, originally developed at Stanford University, when conducted by lay vs. professional group leaders. Drs. Brenda DeVellis and Godfrey Hochbaum developed an Arthritis Patient Education Model, which, through delineation of a psychosocial diagnosis and subsequent intervention, attempted to enhance patient education and self-management. Selective Remembering of Information by Arthritis Patients (Dr. R. DeVellis) is assessing the types of "cognitive structures" (i.e., collections of related beliefs, ideas, and opinions) that rheumatoid arthritis patients use to organize and process information about their illness.

Summary

The University of North Carolina Arthritis Center combines the broadly-based research agenda of the Thurston Arthritis Research Center with comprehensive interdisciplinary clinical programs in rheumatology, orthopaedics, and pediatric rheumatology. In keeping with the University's long tradition of service to the people of North Carolina, a primary aim of the Center is to provide the citizens of this state with the best available arthritis care and prevention strategies. The approach here is twofold. New knowledge is created by laboratory investigation of basic disease mechanisms, by clinical studies of new therapies, by social and behavioral research to better understand how patients and their families cope and adjust to chronic arthritis, and by health services research that examines arthritis from a societal perspective. This information, together with advances in rheumatology and related fields from Duke and other institutions, is then applied to optimum clinical and educational services for North Carolina patients and their physicians. ❑

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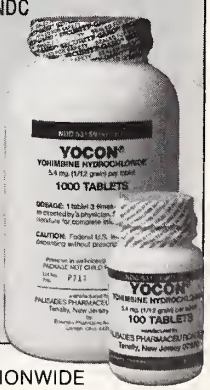
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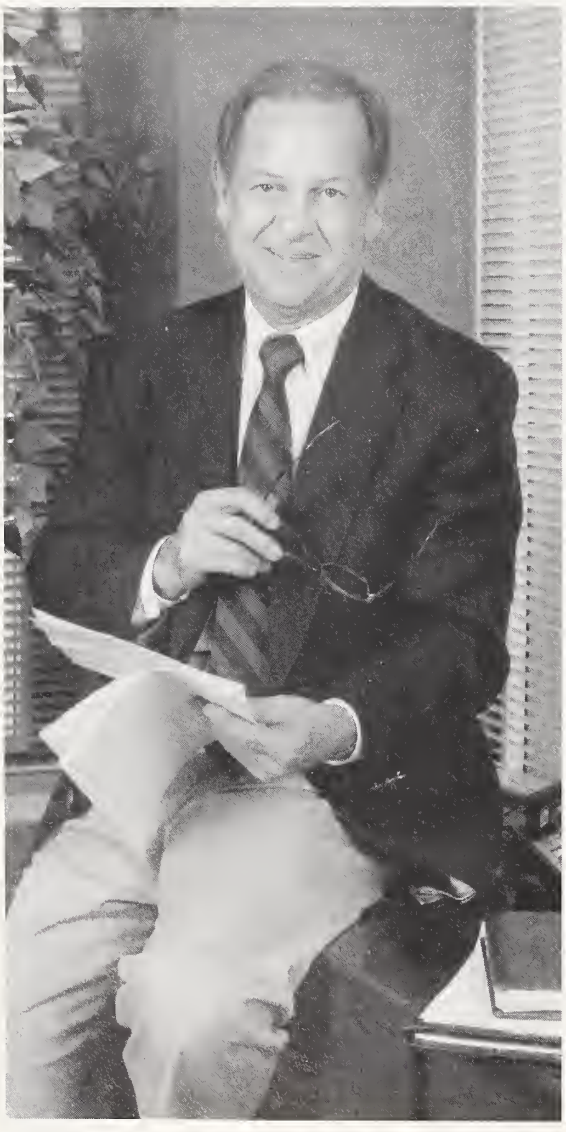
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Which One Is Hardy? Ibuprofen Overdose

Ronald B. Mack, M.D.

Forgive them their trespasses, it's not necessarily their fault. Young health care professionals spent too much of their time reading textbooks and medical journals; the knowledge gained is usually transitory. If only they were more acquainted with the literature of Western Civilization; for in this study the eternal verities are found, that never die. I recently asked a medical student, "What do you think of Hardy's work?" He answered, "Was he the fat one or the skinny one?"

I was referring to Thomas Hardy, the English novelist and poet, who gave us *The Return of the Native*, *Tess of the D'Urbervilles*, *Far From the Madding Crowd*, and *Jude the Obscure*. Hardy's characters are continually defeated in their struggles against their own impulses, against the "malevolent caprices of chance" and against their environment, both physical and social. He was a fatalist. Later on in his life he ceased writing novels and turned to poetry. My favorite is not very dark and is called simply, "Heredity."[1] He says "I am the family face; flesh perishes, I live on."

From the Department of Pediatrics, Bowman Gray School of Medicine, Wake Forest University, 300 S. Hawthorne Dr., Winston-Salem 27103.

Hardy was often frustrated with his work and probably had headaches, literally. He did not have much to choose from, for therapeutic relief, but we do. We can buy aspirin, acetaminophen or ibuprofen, over-the-counter for relief—which one should we choose and will the choice help us to be better writers? I don't think so.

Ibuprofen is the latest product that is available for treating fever and aches and pains, without consulting a health professional. This product is a nonsteroidal anti-inflammatory drug (NSAID) introduced as a prescription-only medication in 1974 and as an over-the-counter (OTC) drug 10 years later.[2] It is available as Motrin IB®, Advil®, Nuprin® and many others, needless to say, alone and in combination with other medications. There are six major classes of NSAIDs; ibuprofen belongs to the propionic acid group.[3,4] Also in this group are fenoprofen, ketoprofen, naproxen, benoxyprofen, carprofen, suprofen and flurbiprofen. As a group NSAIDs are efficient and potent anti-inflammatory agents that are very useful for a large variety of non-rheumatic as well as rheumatic diseases. You can expect some relief from these drugs in treating rheumatoid and osteoarthritis, tendinitis, muscle pains, plantar fasciitis, bursitis, headache, dental pain and dysmenorrhea.

This class of drugs inhibit the synthesis of prostaglandins. (Stop complaining, you who dance with opossums, you have to know this stuff!!) Prostaglandins (they have no relationship to the prostate gland, you churl) are produced and released in response to noxious stimuli, including pain.[5] These chemicals help to mediate pain perception by sensitizing pain receptors to the actions of histamine and bradykinin.[3] Histamine, as many of you recall, promotes the local reaction of edema and inflammation and bradykinin stimulates the nerve endings to produce a pain response. So what, you exhort!! NSAIDs inhibit prostaglandin synthesis by inhibiting the enzyme cyclooxygenase, the enzyme involved in the primary step of prostaglandin synthesis.[5] When this enzyme is blocked, and prostaglandin synthesis is lessened, the inflammatory response is blunted. It needs to be mentioned here that aspirin is a NSAID but that acetaminophen is not and therefore acetaminophen products do not function as anti-inflammatory drugs.

A few words concerning pharmacokinetics are in order, painlessly, I hope. Ibuprofen is absorbed quite rapidly, 80% in 30 minutes to two hours post ingestion. Peak plasma concentrations are observed after one to two hours.[6] The plasma half-life, with therapeutic doses, is approximately two hours. In therapeutic concentrations, ibuprofen is about $95^{\pm 4\%}$ protein bound and has a volume of distribution of 0.11 to 0.19 liters per kilogram.[6,7] Ex-

cretion of this drug is quite rapid and complete. Ninety percent or more of an ingested dose is excreted in the urine as metabolites or conjugates. If an adult takes a single 400 mgm dose (remember the OTC form usually has tablets containing 200 mgm of ibuprofen), there is produced a peak plasma concentration of 29 ug/ml at 90 minutes.[5] Therapeutic plasma levels are 20 to 30 ug/ml.[5] There are parts of this narrative that are well worth remembering, e.g., the elimination half-life is quite short, two hours, even in overdose situations, and the entrance of ibuprofen into synovial spaces is slow but the drug may remain there in higher concentrations as the plasma concentrations fall[7] (ooh, that feels so good). I hope this section did not give you a headache, if it did take some NSAID, but be careful, as the next section will explain.

The Overdose Picture

By now we have all learned that acute salicylate intoxication causes a general metabolic mess and that acute acetaminophen overdose wreaks havoc on your liver. There is nothing specific about an ibuprofen overdose in terms of organ maladjustment and, to speak the truth, the drug is actually quite safe, even in most overdose cases.[8] It appears that ibuprofen, generally speaking, is safer in overdose scenarios than either aspirin or acetaminophen.

In the majority of ibuprofen overdose cases to date the patients were reported to be asymptomatic. The most commonly reported clinical adversities include *nausea, vomiting, abdominal pain, lethargy and drowsiness.*[6] The gastrointestinal effects should not come as a surprise. Prostaglandins maintain the gastric mucosa barrier and NSAID medications inhibit prostaglandin synthesis, even to the extent of causing gastritis, peptic ulcerations, and gastrointestinal bleeding[4] (these events are more likely to be seen in patients undergoing chronic therapy with this drug class).

Certainly severe defects in normal body functioning can also occur and include *coma, apnea, acute renal failure, acidosis, hypotension and bradycardia.*[8] Whereas drowsiness is common, coma is not. Apnea is primarily a problem in pediatric overdose cases. Transient episodes of apnea have been reported in children one to one and a half years of age following ingestion of 2.8 to 7.6 grams of ibuprofen.[7,9] Acute renal failure secondary to ibuprofen specifically and NSAID in general has received much comment in the literature. In some of the recent literature many nephrologists consider drug induced acute renal failure due to NSAID the second most common cause, second only to aminoglycosides.[10] Both the parent drug and its major metabolites are acidic, and their subsequent accumulation in the overdose patient's blood is probably responsible for the metabolic acidosis seen in some patients who overdose on ibuprofen.[11] This acidosis may very well be an increased anion gap metabolic acidosis.[10] Since ibuprofen is rapidly metabolized, the metabolites probably contribute to the increase in the anion gap. Fortunately, such acid products as ibuprofen and its metabolites are generally eliminated rapidly.

The acute renal failure occasionally seen in this overdose situation is intriguing but not too surprising. Prostaglandins normally have several effects on the kidney, including renal vasodilation, maintenance of glomerular filtration rate and increased renal renin release, with subsequent effects on renal sodium and water excretion as well as renal concentration and diluting mechanism.[4,12,13] Renal abnormalities caused by NSAID are probably induced by prostaglandin inhibition. Thus NSAID nephrotoxicity, including that caused by ibuprofen, appears in several different scenarios:[4] acute renal insufficiency caused by a reduction in renal blood flow. Here renal prostaglandin synthesis is interrupted and causes an exaggerated vasoconstrictive response with decreases in glomerular filtration rate and renal blood flow; or acute tubular necrosis, also resulting from decreased prostaglandin-induced vasodilation; or an acute interstitial nephritis, with hematuria and flank pain.[14]

To put this into perspective, NSAID can cause decreasing renal flow and decreasing glomerular filtration rate, increasing sodium, chloride and water reabsorption in the proximal tubules, increasing sodium and chloride absorption in the ascending loop of Henle, hyperkalemia, increasing water reabsorption in the collecting tubules, and the induction of cell-mediated inflammatory reactions leading to glomerulonephritis and acute interstitial nephritis.[15] Next time I get a headache I think I will bite down hard on a wooden stick until the pain goes away. It is only fair to remind the reader, however, that NSAIDs are generally quite safe if you follow manufacturers' advice.

Before we get to treatment of this acquired disorder, a word about dosages and blood levels. The adult therapeutic dose of ibuprofen is 400 to 2,400 mgm/day in divided doses.[3,6] The maximum recommended daily adult dose is 3,200 mg. The recommended pediatric therapeutic dose is 20 to 50 mg/kilo/day in divided doses.[3,6] Therapeutic plasma levels are 20 to 30 ug/ml.[6] Ibuprofen in prescription form is supplied in tablets containing 200 to 800 mg. Ibuprofen in pediatric suspension form, e.g., Children's Advil Suspension® and Pedi Profen Suspension® contain 100 mg/5 ml. It may help to recall again that ibuprofen has a short half-life and most patients who become symptomatic do so within four hours of ingestion.

Management of Ibuprofen Overdose

The management of a patient who overdoses on ibuprofen is made easier if you have a clue concerning the amount consumed or have access to ibuprofen blood levels. The ibuprofen nomogram is also a very useful device.

The majority of reported overdoses, so far, have been asymptomatic: 89% of children ingesting up to 2.4 grams have been asymptomatic and 56% of adults ingesting 1.4 to 24 grams were asymptomatic.[6] No symptoms were seen in overdose patients with two-hour serum levels of 70 to 100 ug/ml.[6] Mild symptoms such as lethargy, nausea, vomiting, and abdominal discomfort were seen in

patients who had levels of 80 to 100 ug/ml at three hours.[7] Serious clinical adversities have been reported (renal failure, hypotension seizures, acidosis) with two-hour blood levels of 360 ug/ml.[7] Serious symptoms are likely with one-hour serum levels of 200 ug/ml or greater.[7]

Most of your ibuprofen ingesters will be preschool children, and the suggested management for them, if ibuprofen levels are not available—and for many of us they will not be—is as follows:

- Children who ingest less than 100 mg/kg—no treatment except observation at home.[7]

- Little people who ingest between 100 and 200 mg/kg (for example, a 50th percentile two-year-old male, weighing approximately 28 pounds, or 13 kilograms, who ingests 13 200 mgm OTC ibuprofen tablets or the equivalent of 26 teaspoons of ibuprofen suspension)—give syrup of ipecac if early post-ingestion, followed by observation at home.[7]

- If the ingestion consists of an amount in the range of 200 to 400 mg/kg, the child should receive gastric decontamination and be observed in a medical facility for at least four hours.[7]

- Some authors allege that ipecac or lavage are not needed, when the ingestion is of a reasonably small amount, if activated charcoal is given soon after ingestion.

- If the ingestion is thought to be 400 mg/kg or more, then probably in-hospital observation is indicated.[7]

- Needless to say, blood gases and renal function tests are needed in symptomatic patients.

It is important to bear in mind that other NSAIDs have different toxicokinetics and toxic potential and may perform differently from ibuprofen in an overdose situation, and therefore each drug involved may be managed in an entirely different fashion.

Finally, a word about the new form of ibuprofen, the suspension, for pediatric use. The package insert suggests that the indications for this preparation, in children, include relief of the signs and symptoms of juvenile arthritis, rheumatoid arthritis, and reduction of fever in children one year or less. In my personal opinion I do not use this drug as an antipyretic; I feel more comfortable prescribing acetaminophen for this purpose. Yes, I know the current literature alleges that ibuprofen suspension produces longer-lasting fever control than acetaminophen,[16] but I do not care. Ibuprofen has so far not been associated with Reye Syndrome but who knows, at this point, what the future will tell us after this drug has been around for a while.[17,18]

Thomas Hardy ends his poem by saying "The years—heired feature that can in curve and voice and eye despise the human span of durance—that is I; the eternal thing in man, that heeds no call to die."[1] I see my sons and my grandsons and shudder, are they going to resemble tough-looking punks also? ❑

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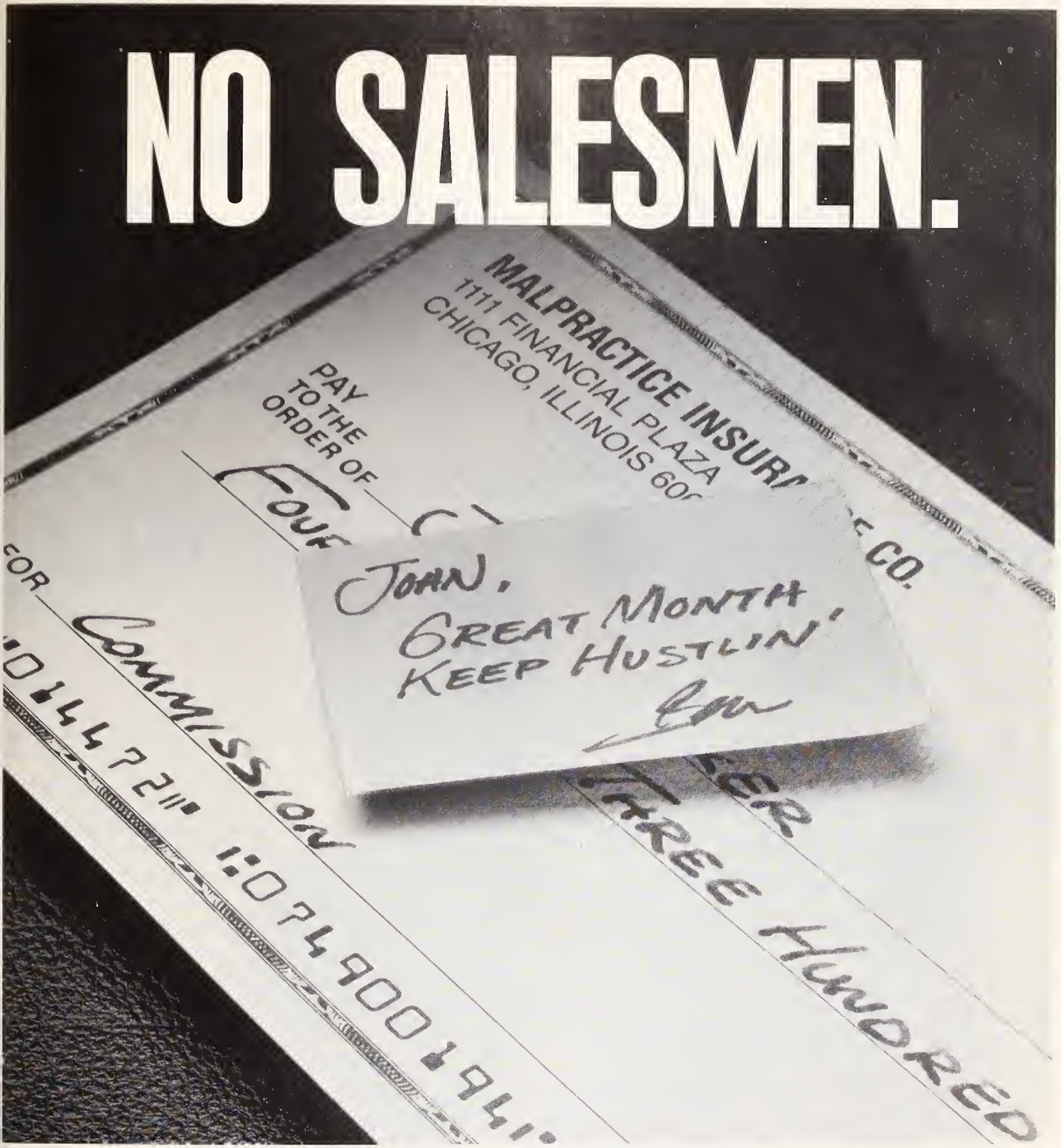
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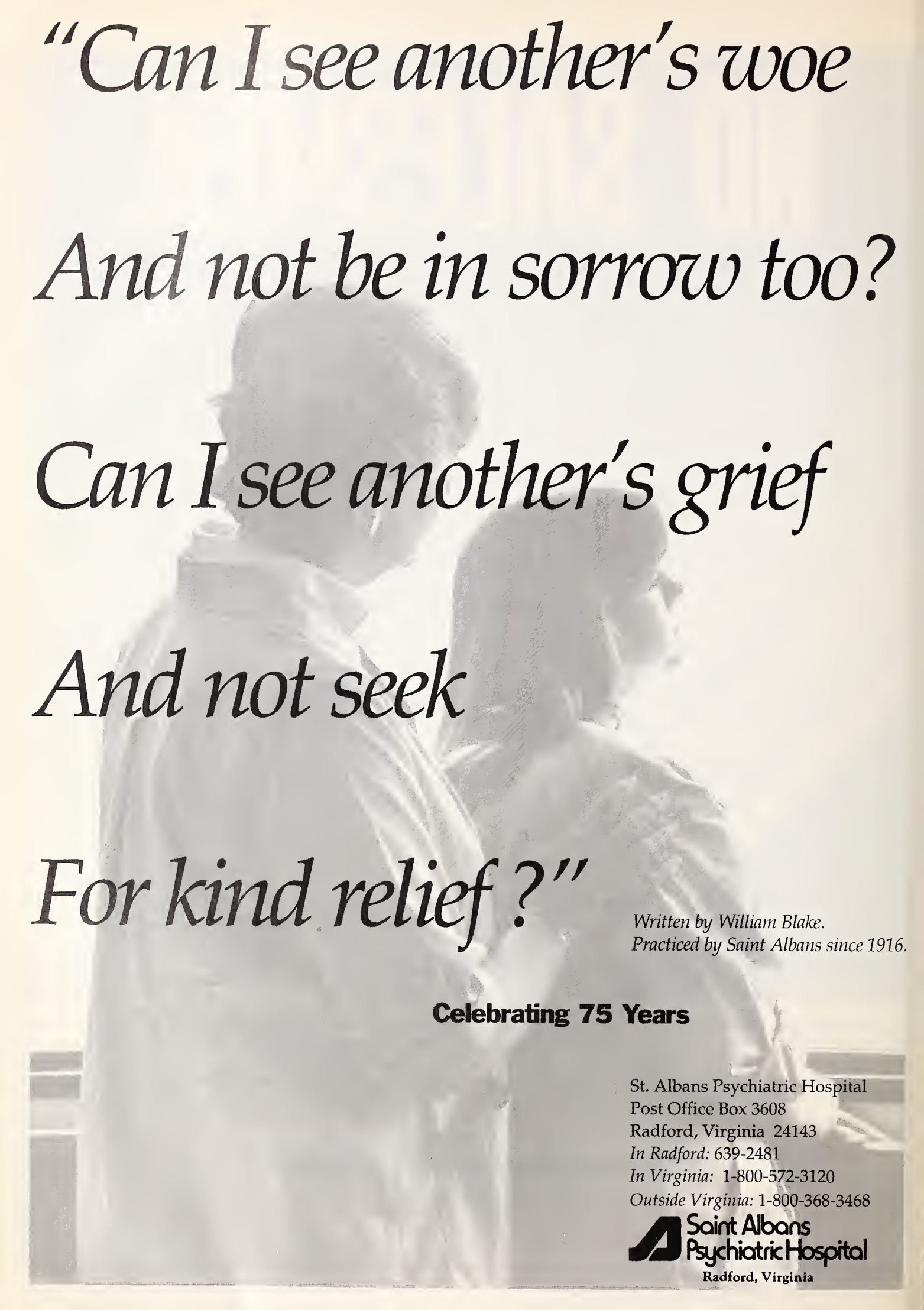
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Health Watch

VOLUME 52 / NUMBER 5 / MAY 1991

Adolescent Pregnancy

ADOLESCENT CHILDBEARING

Mary Vernon, MD, MPH

It is another day of clinic and Mary, a 25-year-old mother, brings her six-month-old infant to the doctor for a check-up. During that visit the doctor notices that Mary appears pregnant. The office pregnancy test is positive and by history Mary is approximately 5 months pregnant. She had not sought any prenatal care, and the father of her unborn child had been murdered three months earlier. Mary had her first childbirth at age 16. Her second childbirth occurred one year later; a third childbirth occurred six years after the second; a fourth child was born one year after the third; and a fifth childbirth occurred ten months after her fourth childbirth. Her five children were by three different fathers.

Louise, a 22-year-old mother of four, had her first childbirth at age 15. The first, second and third childbirths each occurred one year apart. The fourth childbirth occurred four years after the third child was born.

Ellen is also 22 years old and has two children. Her first child was born when she was 16 years old. She married the teenage father when the child turned one year old and the second childbirth occurred six years later when Ellen was 22. They are still married and the father comes to each clinic visit.

Theresa is 15 years old and just gave birth. The father was murdered at age 30 when Theresa was 4 months pregnant. She is very secretive about her past and we suspect drugs were the cause of the father's death.

In many ways these teenage mothers are different but their circumstances have a haunting sameness. Teenage childbearing continues to be a distressing problem among American teenagers. Every three minutes, a girl aged 10-17 gives birth in the United States. This trend has changed very little in the past decade. In fact, the trend in birth rates among teenage girls 15 years and younger indicates a small but significant increase as compared with older teenagers.

Like Mary, Louise, Ellen and Theresa, many young girls become pregnant in their early or mid-teen years, have babies out of wedlock, drop out of school, experience repeat pregnancies closer together, receive little or no prenatal care and rarely have the involvement of the child's father. The younger the teenagers are the more likely they will have these experiences.

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Consequences of Teenage Childbearing

A number of consequences accompany teenage parenthood. The teenage mother as well as teenage fathers have problems that threaten to change their lives permanently. Unfortunately, few teenagers appreciate the effects of childbirth on their lives. For example, they do not anticipate the demands of motherhood such as getting up several times at night to change the baby's diaper and feed the baby, walking a crying baby to sleep, running late for school because the baby spit up on them just before they were about to leave the house or having to take the child several times in one year for well child care. When their friends are going to the movies, talking on the telephone or playing video games, teenage parents are burdened with the care of the child.

Childbirth among unmarried teenagers, particularly young teenage girls, often results in severe health, social and economic consequences:

- a higher incidence of low birth weight babies
- a higher infant mortality and morbidity rate
- a higher percentage of childbirth complications
- a decreased likelihood of completing school
- a higher risk of unemployment and welfare dependency
- limited vocational opportunities
- larger families
- vulnerability to psychological problems and distress

Out-of-Wedlock Births

The number of marital births to teenagers dropped dramatically during the 1980s, while the number of out-of-wedlock births increased steadily. In 1988, 66% of all births to teens occurred outside of marriage.

Percent of out-of-wedlock live births

	1970	1980	1986
14 years and younger	80.8%	88.7%	92.5%
15 to 19 years	29.5%	47.6%	60.8%

Repeat Childbirth Rate

Becoming a parent during the teenage years is strongly associated with having a large family. Younger teenage mothers have been found to have larger families than older teenage mothers. Like Mary and Louise, women who first gave birth at ages 16 or younger are more likely to bear a second child within the next two years. Seventeen percent experience a repeat pregnancy within the first year following their first childbirth. Almost half are projected to have a second child within three years.

Repeat childbirth rate within two years

16 years or younger	26%
17 to 18 years	20%
19 to 22 years	22%

There are important racial and ethnic differences in the likelihood of a rapid repeat childbirth. Being black and being an economically disadvantaged white teenager are significantly associated with the likelihood of having a second birth within two years. As teenagers, Hispanic women have more children than do whites, but fewer than blacks of the same age. Most second pregnancies occur in teenagers who are not using effective contraceptive methods and the pregnancy is most often unplanned and unwanted.

Factors Affecting the Rate of Second Pregnancies

- Age — Teens under the age of 16 years are more likely to have a repeat pregnancy. The younger she is, the more likely she is to become pregnant again in two years.
- Race — Hispanic teenagers are more likely than either black or white teenagers to have an early second birth.
- Marital Status — Married teenagers are not more likely than non-married teenagers to have a repeat pregnancy probably because married teens are more likely to use effective birth control.
- Education — Poor school attendance and teens who drop out of school are predicted to have a rapid second pregnancy.
- Economic Status — More than half of the disadvantaged teenage mothers have a repeat pregnancy (56%) within two years of the first birth.

Welfare and Poverty

Teenage mothers tend to come from disadvantaged backgrounds even before becoming teenage parents; therefore, childbearing compounds the effect of poverty on their lives. More than half of the women who received AFDC payments in 1988 were teenagers at the birth of their first child. Teenage childbearing is not only a costly burden to the teen

parents; the teen mothers' families and society are also affected. Teenage fathers usually have lower incomes and less education and drop out of school to find a job that is in most instances low paying.

The public costs of births to teenagers are high. There is a rising economic cost involved in raising children. In addition to direct costs, there are "hidden costs" such as hourly wage, average yearly income, job opportunities and larger families. In 1987, $19.5 billion was spent on families that were begun when the mother was a teenager.

Teenage Fathers

Teenage fathers have often been ignored or considered irresponsible and uncaring. They are referred to as the "missing link" or the "forgotten partners." We are learning that many teen fathers are anxious to participate in the parenting of their children but they need a lot of support and help to assume the father role. Some teenage fathers abandon their partner after she becomes pregnant but research indicates that others are interested in and financially support their child.

What about the role of the teenage father? Some teen mothers want the relationship with the teen father to continue. They may even fantasize about getting married or they may marry to legitimize the baby. Others choose to discontinue the relationship altogether. Are teen fathers not expected to take responsibility for the child because we don't allow them to be a part of the child's life? Specific programs have shown that teenage fathers will become involved in the care of the child if we reach out to them and help prepare them to be fathers. Unfortunately, most fathers are not in a position to provide financial support for the child because of unemployment. Also, on an average the father is two to three years older than the mother.

Care of Pregnant and Parenting Teens

The health and social needs of pregnant and parenting young mothers are numerous. It is possible to provide the services and activities that can decrease some of the burdens faced by the teenage parent.

Teenage mothers are vulnerable to emotional stresses. Those who receive a high level of support report lower levels of stress than those who had low levels of support. Problem areas most frequently reported by teenage mothers are:

- Child care arrangements
- Living arrangements
- Employment
- School
- Relationship with peers
- Relationship with parents
- Housework and errands
- Health
- Finances
- Job counseling
- Community services
- Child care information

Advice for Parents of Teenage Mothers

Parents play a significant role in guiding their teenagers' lives. Parents mold the value system and this value system in turn frames the way in which teenagers view sexual involvement and early childbearing. When communication is open between parents and teens, it is easier to discuss personal matters such as menstruation, sexual intercourse, dating, pregnancy and birth control. Understanding some of the reasons why teens get pregnant can help parents communicate better with their teenagers.

Why teens get pregnant

- Media influence — the most powerful means of communication in our society are giving teens some strong messages about sex through music, MTV, soap operas and prime-time television programs.
- Peer pressure — teens often feel "everybody else is doing it so something must be wrong with me if I don't."
- Idle time — working parents are often unable to supervise their teenagers adequately. Many teens go to the malls or just hang out. Studies indicate that most pregnancies occur in the home between 3 and 6 pm.
- Lack of self-esteem — a teen with low self-esteem finds it difficult to say "no" to pressure from a boyfriend because she is afraid that he will leave her for someone else.
- Unhappiness — some teens feel so unhappy about themselves that they believe having a baby would enable them to feel happier, have someone to love them or bring the family closer together.
- Parent-teen problems — many parents are not comfortable talking to their children about sex and birth control. Some teens have dysfunctional families due to economic or emotional circumstances that make it difficult for parents to provide guidance to their teens. Many teens may have sex or want a baby as a way to rebel against parents or to become independent.
- Lack of information — parents should be the primary sex educators of their children and teens. Most teens do not receive accurate information about human sexuality and effective birth control methods. Some even risk becoming pregnant by not using birth control because they are too afraid that their parents may find out they are using birth control. A fear of the parent's anger and possible physical abuse is greater than the teen's fear of getting pregnant.
- Drugs and alcohol influence — teens may become pregnant while under the influence of drugs or alcohol which can decrease their ability to say "no."

What to do if you think your daughter is pregnant

- Be able to recognize the symptoms of pregnancy such as a missed period, frequent urination, nausea (sick to stomach), breast enlargement or tenderness, weight gain, change in appetite or feeling tired all the time.
- Advise your daughter and take her to a clinic or doctor for a pregnancy test.
- Be aware of local resources for education and intervention such as teen pregnancy clinics, public health agencies, civic organizations and volunteer groups.
- Talk to the boyfriend of your daughter about his responsibilities.
- Seek peer counselors (other teenagers) who have experienced a first time pregnancy to help prepare your daughter for what is to come in the future. Peer counselors are also very helpful in encouraging teens to use birth control.
- Role model good parenting skills.
- Provide a good support system for the teenager.

Help your children make decisions about parenthood by having them ask themselves these questions:

1. Would I want me for a parent?
2. Will I be a good parent? Will the other person be a good parent?
3. What if I don't have a partner? Do children need two parents?
4. Do I have the time and money necessary to raise a child?
5. Do I want to spend the next 17 to 20 years loving and caring for a child?
6. Do I want a child because I am lonely and want someone who is "mine"?
7. Will having a child interfere with my education and career goals?
8. Will I be able to help my child grow into the person I would want him or her to be?
9. Does the other person want a child as much as I do?
10. Is the other person willing to help raise a child, or will I be faced with being a parent alone?

Sources for Getting Help

When the communication is open between parents and teenagers, it is easier to discuss personal matters. Parents should use every opportunity to talk and be aware of "teachable moments" for discussing and reinforcing the development of healthy sexual attitudes, behaviors and values.

Sometimes parents feel uncomfortable talking about sexuality with their preteens and teenagers. If there are parent-teen communication problems, it may sometimes be better to talk things over with someone outside the family. Parents and teens might want to talk to the school counselor, teacher, clergy, youth director, social worker, psychologist or physician.

Parents may obtain free materials and pamphlets from the local health department, the North Carolina Division of Human Resources Family Planning Branch, the United States Public Health Service, which publishes public affairs pamphlets, and the library. Below is a list of available pamphlets and reading material for parents and teens to help discuss facts and feelings about growing up as a sexual being:

How to Say "No"
Talking with Your Child about Sex
Talking to Preteenagers about Sex
Eight Popular Reasons for Having Intercourse That No Smart Teenager Would Use
Choices - You and Sex
Growing Up and Liking It
Ten Ridiculous Ideas That Will Make a Mother out of You
Ten Ridiculous Ideas That Will Make a Father out of You
Parent-Teenager Communication
Sex Education - The Parent's Role
How to Tell Your Child about Sex ❑

1991

June: .....*Teenage Pregnancy/Infant Mortality*

July, August, September: .....*Nutrition*

October, November, December: .....*Medicare*

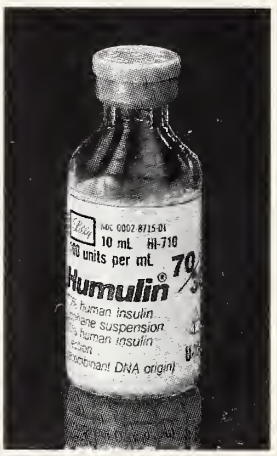


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Adolescent Health Issues: What Is Our Role?

M. Joycelyn Elders, M.D.

Today there are 70 million children in this country under 20 years of age. They represent the most valuable resource we have. They are our future. Yet the facts about children in the United States are not encouraging (see table 1). Too many grow up poor, ignorant, and enslaved. Too many grow up in fragmented families or receive inadequate parenting, health care, education, motivation and hope.

The present status of our children is an affront to democratic ideals, especially to the notion that all children should have an equal chance to become fully productive and valued citizens. We are risking the future of our society as we know it, because of our failure to invest in the next generation.

Table 1.
Youth at Risk

Five million children under six live in poverty in the United States.

If the rate of child poverty continues as it has for the past 20 years, 40% of the children in this country will be living in poverty by the year 2030.

Infant mortality has dropped since 1970 but progress slowed during the 1980s, leaving the United States behind 19 other industrialized nations in its infant mortality rate.

Unlike other age groups, child death rates have not continued to decline. In fact, among black infants, white children one to four years old, and black adolescents and young adults, the rates actually increased.

At the beginning of the decade one in four children or adolescents were receiving infrequent medical care or no care at all. Since then, the proportion of uninsured children has risen steadily.

More than a half million 12 to 17-year-olds admitted in 1988 to using cocaine. Half of that age group said they had tried alcohol and two-thirds had consumed alcohol within the past 30 days.

More than 40% of that same age group had smoked cigarettes. Adolescents who smoke are three times more likely to consume alcohol, eight times more likely to smoke marijuana, and 20 times more likely to use cocaine.

Each year in the United States, more than one million young women less than 20 become pregnant. If current rates continue, one in ten will give birth by the time they turn 18.

Adolescents between the ages of 13 and 19 are showing some of the greatest increases in the number of reported AIDS cases. More that 2.5 million adolescents contract a sexually transmitted disease each year.

Only 27% of three- and four-year-olds from families with incomes less that $10,000 are enrolled in pre-kindergarten programs.

Pregnancy is the most prominent reason for girls leaving school. Unmarried teen mothers are half as likely to graduate from high school as other girls. Their children are more likely to fail in school and become dependent on public assistance.

Violence and injuries account for three out of four deaths among our young people.

The Merrimon Lectureship in Medicine, established by the late Dr. Louise Merrimon Perry "in respect and honour of the Great Traditions of the Science and Practice of Medicine," was inaugurated in 1966. Dr. Perry's idea was that the lectures be open to all, but that they be concerned with "the Origins, Traditions and History of the Medical Profession and of that Ethical Philosophy which must dominate this Field of Human Endeavor." It was her intention that the Merrimon Lecturers be distinguished both for scientific or clinical skills and a notably humane attitude toward Medicine.

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Children's Health

Unlike most other age groups, our children's death rates have not continued to decline during the 1980s. Among black infants, white children one to four years old, and black adolescents and young adults (15 to 24) years old, death rates actually increased from 1985 to 1987. Deaths due to suicide and homicide have increased during the 1980s for children, adolescents and young adults.[1] Injuries, particularly due to violence, have replaced communicable diseases as the primary cause of death among adolescents.[2]

"Unlike most other age groups, our children's death rates have not continued to decline during the 1980s."

Since 1976, immunization coverage has deteriorated rather than improved in the U.S. In 1985, 61% of children one to four years old were vaccinated for measles, down from 66% in 1976. Similar declines were observed for rubella (59% vs 62%), DTP (65% vs 71%), and polio (55% vs 62%). Only mumps vaccinations increased (59% vs 48%).[1]

Nationally, obesity has been increasing over the past two decades among children 6 to 17 years old. Increases have been greater among black than among white children.[3]

In 1981, the Select Panel for the Promotion of Child Health reported that 14% of children and adolescents did not receive needed medical care, and 12% had no regular source of care.[4] In 1981, 18% of children 10 to 18 years old were not covered by health insurance; by 1986, the proportion of uninsured had risen to 21%. This rise parallels an increasing proportion of adolescents in poor households—the poorer the household, the less likely its children had any health insurance. In families whose incomes were less than 50% of poverty, 40% of adolescents were uninsured, while in families with incomes of 300% or more of poverty, less than 10% were uninsured. However, in every income bracket there was a consistent increase in uninsured adolescents from 1981 to 1986.[5]

Children and Poverty

Most Americans see children as innocent victims deserving of health, education, motivation and hope. Moreover, as concern has mounted about the future competitiveness and productivity of our economy, investing in the next generation has come to be viewed not just as an act of compassion, but as an economic necessity.

Yet there is little evidence of investment in children's programs. The federal budget has increased by over 150% in the past ten years. Spending on children's programs has increased only 15%. Over the last ten years, the only area in the federal budget to grow substantially was military spending—by almost 50%. We don't need to spend money to send our kids overseas to die. They are slowly dying here at home. However we can't blame the government, because we are the government.

Since 1980, children have become the poorest age group in American society, partly because of the growth of single-parent families and partly because real incomes have stagnated.[6] Ten years ago, one in five were poor. Today, it is one in four. And if the rate of child poverty continues as it has for the past 20 years, 40% of the children in this country will be poor by the year 2030. We must change our ideas about who our poor children are. They are no longer defined along racial or regional lines: 42% of the five million poor children under six are white. You can still find about two out of five poor children in this country living in the south, but it is other regions that are seeing the most rapid increases.[7]

It is time to recognize these children not as the underclass, but rather as the disadvantaged. They are "youth at risk" (table 1). Their poverty puts them at greater risk for abuse. In a survey of documented child abuse cases in 1986, children living in families with annual incomes below $15,000 were about seven times more likely to suffer emotional, physical or sexual abuse as were children from higher-income families. Their poverty puts them at greater risk for the results of poor nutrition. They are more likely to exhibit signs associated with poor nutrition such as growth retardation, anemia, and poor school performance.[7] It is time for us to become power brokers for the powerless, the children.

"We don't need to spend money to send our kids overseas to die. They are slowly dying here at home. However we can't blame the government, because we are the government."

Adolescence and Drugs

It is also time to change our approach to the drug problems of our youth. More than a half-million 12- to 17-year-olds admitted to using cocaine in 1988; 50% of that group had tried alcohol, and 66% of them had consumed alcohol within the past 30 days. Forty-two percent of those children have smoked cigarettes, and 11% of them were smoking at least 10 cigarettes a day. We know that tobacco is a deadly substance, but we have also learned that it can be a gateway drug—one that increases the chances for use of other harmful substances. Adolescents who smoked were found to be three times more likely to consume alcohol, eight times more likely to smoke marijuana, and 20 times more likely to use cocaine.[4]

Most importantly, we know that education can significantly reduce the rate of tobacco use among our adolescents. Instead of insisting on comprehensive education, we allow the right wing to restrict our education efforts because we might talk about sex. In some places, the tobacco interests intimidate our efforts. We're allowing both to use the backs of children as a soapbox.

Teenage Sexuality

While some people are moralizing about what we teach our children in school, our children are proving they already know a great deal about sex. They know enough to give this country the highest rate of teen pregnancies and births in the industrialized world. Our children know enough about sex to assure this country the highest rate of abortions in the industrialized world. If the current rates continue, one in ten adolescent women will give birth by the time they turn 18.[4] In North Carolina, the percent of births to teen mothers has improved somewhat, as it has in my state, Arkansas.[8] But Arkansas is still second in the nation in the number of births to teens; and as the state's health director, that is something I cannot abide.

Every year, more than 1.1 million young women less than 20 years of age become pregnant. Sadly, more than 330,000 of these young women are in the South.[9] Of these million plus pregnancies, five out of six are unintended, including 92% of those conceived premaritally and half of those conceived in marriage. Of all women in the United States, four out of ten will have had a birth, an abortion, or a miscarriage by the age of 20.[10] For the young women who face the consequences of early, unplanned pregnancy, the choices are difficult and few. The impact lasts a lifetime. It has been said frequently that never has a decision made in private become so public for so long as that of teenage pregnancy.

The Southern Governors' Association has focused on adolescent pregnancy and childbearing for the past several years because of the region's high teenage pregnancy rate and the relationship between teenage childbearing and the region's high infant mortality and low birthweight rates. Babies born to adolescent mothers are at greater risk of being born too small, too soon; and consequently, they are at greater risk for death or disability.[11] More than 10% of black teen mothers in the South give birth to low birthweight babies.[1]

The loss of education and potential wages due to early, unplanned parenthood, and the exorbitant public expenditures for supporting families begun by teenagers, has stimulated southern leaders to examine the barriers to adolescent pregnancy prevention. Barriers to prevention programs include: (1) cultural values of the South, which are grounded in conservative, fundamental religion and racial discord, where sex education is feared and where family planning services for adolescents are misrepresented as abortion mills; (2) too few advocacy efforts; (3) poor community support; (4) inadequate resources; and (5) little appreciation for prevention.[12] Removing these obstacles will be difficult, but we must try for the sake of the children. We no longer have the luxury of debating whether adolescent pregnancy is a health issue, a moral issue or an economic issue.

These are children having children. If we cannot respond to the emotional pain and frustration suffered by vulnerable adolescents then perhaps we can understand the financial burden. Using only the sums of Aid to Families of Dependent Children, Food Stamps, and Medicaid payments as a gauge, we estimate the public cost of teenage childbearing in this country in 1988 was more than $21.55 billion. In my state, Arkansas, the cost was nearly $100 million, and in North Carolina, it exceeded $237 million. Each day, 75 babies are born to North Carolina teenage mothers.[13]

Pregnancy is the most prominent reason for girls leaving school. Girls who become pregnant are half as likely to graduate from high school as other girls, and their children are more likely to fail in school and become dependent on public assistance.[15]

Most teenage girls giving birth are single mothers. In 1987, 51.6% of white and 91.0% of black teen mothers were not married.[1] Though research on teen fathers is limited, studies have shown that males who father a child as a teenager are more likely to drop out of high school than those who don't. In one investigation of adolescents, more than 60% of the fathers who married the mother dropped out of high school. Forty percent of the unwed fathers did not complete their education.[14]

Compared to high school graduates, children who drop out of high school are 2.5-fold more likely to be found in unemployment lines, 3.5-fold more likely to be arrested for a serious crime, and 7.5-fold more likely to be on welfare roles.[15] For young men without college, real earnings have fallen since 1973, making it more difficult to support a family above the poverty level. During the past 20 years, the proportion of young men 18 to 24 years old, who are neither in school, employed, nor in the military, has doubled to 12% of white men and almost 30% of nonwhite men in that age group.[15]

"...2.5 million adolescents contract a sexually transmitted disease each year. These are the children who we refuse to admit are sexually active."

The results of adolescent sexual activity are also evident in the rising rates of sexually transmitted diseases, including AIDS. During the two years ending in August, 1990, the number of AIDS cases reported among U.S. children 13 to 19 years of age increased by more than 23%. The exposure category that showed one of the greatest increases was adolescents who had sex with an intravenous drug user. The absolute numbers are in the hundreds when we talk about AIDS in

our adolescents, but at the current rate of increase, we could soon see case numbers in the thousands.[16]

We are talking of millions, though, when we examine the numbers of sexually transmitted diseases in our youth. According to the Centers for Disease Control, 2.5 million adolescents contract a sexually transmitted disease each year.[4] These are the children whom we refuse to admit are sexually active.

Children's Emotional Well-Being

Some of today's adolescents will not live to be adults. Among those now less than 24, 151,000 will not reach their twenty-fifth birthday. Three of every ten who die will be killed in motor vehicle collisions. Half of those fatalities will involve alcohol. One in ten adolescent deaths will be a homicide; another one in ten a suicide.[4]

In 1988, a Gallup poll asked eighth and tenth graders about their feelings and whether they were satisfied with their lives. Sixty-one percent of them said they felt sad and hopeless, almost half said they had difficulty coping with home and work, and more than a third told surveyors they had nothing to which to look forward. But the most alarming answers concerned suicide—14% of them had attempted it.[4] We must give our children reason to hope. We must give them reason to believe that life can be rich—that the American dream is not equal opportunity for some and hopelessness for others. It is hard to convey those messages, though, when so many of our young people cannot read or write.[17] It is hard to spread that message when, as in my state, we have more black men in prison than in college.

These are not new concerns. The problems of poverty and adolescence have been with us for decades, but we haven't solved them. We have only put a band-aid here and there and hoped it would stay on. It is now time for major surgery, and we can use the schools as our operating rooms. The answers will come in more comprehensive education—education from preschool to twelfth grade.

Many have asked why, as a state health director, I have chosen to push for education. My reasons are simple. They have been embraced by a number of organizations—the National Commission on the Role of the School and the Community in Improving Adolescent Health, in its CODE BLUE report,[1] the National Commission on Children, and the National Health Education Consortium. The last summed up the need for a marriage between health and education with these points: It costs $20,000 a year to support an 18-year-old either in prison or at Stanford University. It costs $15,000 a year to educate a child born addicted to drugs or alcohol. It costs $9,000 a year to educate a child with ordinary special education needs. However, it only costs $3,000 a year to educate a healthy child.[18]

For those of you who enter the health community, these concerns will become your own. You will face the same dilemmas that I have seen in my 30 years as a pediatric specialist. You will see patients whom you know you are only helping temporarily and dismissing back into the world that delivered them to your care in the first place.

It has been easy for us to give the responsibilities to someone else, to departmentalize and compartmentalize our children's needs. That has not worked. It is time for all of us to see the need for cooperative efforts to guarantee our children equal opportunity and give them a chance for an equal outcome.

Strategies for Intervention

I have proposed six strategies—six prescriptions, if you will—that I believe will secure an equal chance for our children, a chance that the children of today will be bright, energetic, and healthy adults of tomorrow (table 2).

Table 2
Suggested Strategies

Early Childhood Education—high quality preschool education programs for all children that guarantee equal opportunity and improve the chances for equal outcome.

Comprehensive Health, Family Life, and/or Sex Education—educational programs from kindergarten through twelfth grade that help children make healthy choices, improve their self-esteem, and accept as much responsibility for their own lives as possible.

Parenting Education—education and support of parents, especially for young and poor parents.

Male Responsibility—instruction on obligations in pregnancy and parenthood, including a requirement of financial commitment from fathers and identification of father by social security number on infants' birth certificates.

School-Based Health Services—health care, including family life counseling and contraceptive services for adolescents.

College Tuition for Good Students of poor Families—free college tuition and books at a state-supported school for students with at least a "B" average, good citizenship record, and a family income of $20,000 or less.

Early Childhood Education

My prescriptions begin at the beginning of a child's life. It is time for us to make Early Childhood Education a reality for all children, but especially for those children at risk. At the age of three a child is half as tall as he will ever be. At age four, he knows half as much as he will ever know. Why, then, are we waiting until kindergarten or first grade to intervene academically?

The successes of Head Start and other high-quality preschool programs have

been documented and examined. They represent one of the earliest opportunities for primary prevention. Young children, especially those who begin school with the disadvantages of impoverished environments, are far more likely to succeed in elementary and secondary education when they are given early opportunities for social interaction and intellectual development.[17]

The Perry Preschool Project is one example of a successful early childhood development program. Researchers followed the two groups of black three- and four-year-old children from an impoverished neighborhood for 20 years. One group participated in at least a year of preschool education. The other group had no early intervention. The difference in their quality of life 20 years later was significant.[15] Eighty-four percent more of the Perry group were employed, and 81% more were attending college. Less than a third of the Perry group had serious scrapes with the law, while over half of the comparison group had been arrested. Teen pregnancy rates in the preschool group were 50% less. In constant dollars (1981 dollars), the researchers estimated the early childhood development program had saved society at least $3,000 per child in costs associated with delinquency and crime, $5,000 in special education or remedial programs, and $16,000 in public assistance. They concluded that the Perry children would return society's initial investment in taxes they would pay as adults from their improved employment and earnings records.[19]

The Perry Project is only one of many studies examining the impact of early childhood education. While there is a growing body of research documenting the benefits of these programs, we are still not offering this education to all of those who need it most.[17] Many of us were happy to see the White House increase the Head Start budget, but even with the additions, Head Start will only be available for one in five high-risk children. That varies from a low of 4% to a moderate 40% of the children who are eligible. What about the rest?

The majority of children from all income levels attend kindergarten. However, only 27% of 3- and 4-year-olds from families with incomes less than $10,000 attend pre-kindergarten education programs, while more than 80% of families who earn more than $20,000 a year have preschool experience.[7] We need to ask ourselves if we are willing to take the risk with the children who are missing those developmental opportunities. That is what the National Center for Children in Poverty wondered as it pointed out that the expansion of Head Start and other preschool programs was long overdue. It recommended making the programs full-day and full-year to meet the needs of employed parents.

Comprehensive Health, Family Life, and/or Sex Education

My second prescription calls for Comprehensive Health Education Programs from preschool through the twelfth grade. To wait until high school, or even junior high, to teach children the things they need to know about their own bodies and their own lives is too little, too late. In Arkansas, one of our junior high schools has 28 pregnant girls. They did not wait for us to teach them anything. They taught themselves, and the consequences will be theirs and ours.

Of course, instruction should be appropriate to the child's age and need to know. But we can not be timid either, even with the youngest child. Many times I am asked what we should be telling kindergartners or first-graders about their bodies. I respond with what we know about sexual abuse in this country. We know that more than 13% of American women have been exposed to some type of sexual abuse before they are 18 years old. About 10% of our young men have been sexually abused before they are 20. Often the abuse is initiated by someone they know—their mother's boyfriend, their father, their grandfather or an uncle. We also know that 84% of the girls less than 14 years of age who become pregnant were impregnated by someone in their own home. Knowing that, we should be telling all of our five-year-old children that if someone touches them inappropriately, they should tell someone.

We should be giving those same five-year-olds the tools to develop healthy self-esteem. Self-respect will follow if we adequately blend their health and education needs. In its Code Blue report, the National Commission on the Role of the School and the Community in Improving Adolescent Health found that efforts to improve school performance which ignore students' health are ill-conceived. The same is true, it found, of health improvement efforts which ignore education.[20]

So we must accept that we can improve educational achievement if we improve student health. A Minnesota study found that youths with below-average grades are two to five times more likely to attempt suicide, smoke cigarettes daily, use alcohol excessively and be more sexually careless than their peers with above average scores.[20] We must teach them to avoid these behaviors. They need to know about human nutrition and physiology and the risks of substance abuse. In the same way, they need to know about human reproductive biology and development and the risks of early and unprotected sexual activity. We can no longer ignore or deny that our children need this information. If we don't give it to them in an appropriate educational environment, someone else will, and the delivery of that information may be anything but appropriate.

Parenting Education

My third prescription again focuses on education—Parental Education. Parents play the most significant role in guiding the course of their children's lives. Individuals are not born knowing the skills for effective parenting, yet parents mold the value system of their children. Their value system frames the way in which children view the world.

A recent survey of knowledge about sexual behavior found room for improvement among U.S. adults. Nearly half

(49%) of the respondents did not know that women can conceive during menstruation. Nearly a third thought homosexual preference could be determined by someone's appearance. The least accurate responses were given by persons with less than a high school education.[21]

We often hear that sex education should be left to the parents, but these findings indicate we need to educate the parents. This should be a shared responsibility with the involvement of churches, civic organizations, worksites schools and communities. We can no longer look at the family as an isolated unit that would resist any intervention as interference.

It is time to realize that too many parents feel trapped in a cycle of despair brought on by the problems of poverty or teen pregnancy—incomplete education, welfare dependency, or an unstable family life.[15] These parents see little hope of improvement for themselves. How, then, can they inspire hope in their children? Other parents are seeing their time with their children restricted because of the need for a two-income household and the demands of a busy lifestyle. Many of them want the instruction, counseling and peer discussion a parental support program could provide. Again, community resources could be called on for help. We must sell our employers, civic leaders, schools, and governments on the idea that community progress is tied to the strength and progress of the family. For parents living in poverty, the realities of hunger, violence and destitution far outweigh the desire to be model caregivers.

Male Responsibility

My fourth prescription calls for a new focus on the silent partner in the teen pregnancy dilemma. We need to reinforce Male Responsibility. We must teach our young men that being a father requires more than donating a sperm. For too long, we have concentrated only on the female in family planning and pregnancy prevention efforts. The male has been all but ignored. This is evident even in the research. There are few studies on the male's role and profile as a teen father. Most of the studies have been aimed at the teen mother, who is obviously less difficult to find. Some researchers question the reliability and accuracy of studies about the fathers of babies born to teen mothers. They contend that even if the father is located, they are generally less willing to participate in surveys for several reasons: they are reluctant to divulge personal fertility information, unaware of their paternity, and fearful of being held accountable financially.[12]

That fear of financial accountability is something we need to address. I have asked my state legislature to consider this proposal—that we take the top 17% of the father's salary for child support until his child is 18. We could facilitate the collection of the child support by requiring the social security number of the father on every child's birth certificate. If young men know that they will be held responsible for any child they help conceive, perhaps they will think about the consequences of their actions.

We need to give our young males and females the belief that they can accomplish more in their lives than procreation. All community resources must be summoned for support in providing the opportunities for growth and self-expression in other arenas of life.

School Based Health Services

My fifth prescription has probably generated the most controversy in Arkansas and perhaps the most interest outside the state. Comprehensive School-Based Health Services should be made available to all of this nation's children.

Our children, as we have seen, are at a definite disadvantage in receiving preventive health care. Comprehensive school health services, coordinated with comprehensive school health curricula, provide children with resources they need to overcome these disadvantages. More importantly, they make the needed services accessible children. The American Medical Association found many barriers that interfere with adolescents accessing existing health services, including insufficient health insurance coverage, parental consent requirements, breaches of confidentiality between adolescents and providers, and poor compliance with advice. School based clinics, properly instituted, can remove most of those barriers.[4]

It is the family life counseling and contraceptive services that have drawn the most vocal opposition from right-to-life and right-wing groups, who claim the clinics promote abortion. School-based health services provide comprehensive primary health care services—including pregnancy prevention—not abortions. It is plainly obvious that if a child is not pregnant, she does not need an abortion. Furthermore, the need for an abortion by any child represents a personal failure for every citizen in this country.

While these opponents are very vocal, they are apparently in the minority. Sixty-nine percent of the respondents to a 1987 AMA survey agreed that a clinic is needed in their community to provide adolescent health services, including help with sexual problems and birth control.[4]

In Arkansas, the Department of Health operates several such programs in public schools. Our approach is to offer a menu of specific services from which the local school boards may choose. A contract is written between the department and the school board clearly establishing responsibilities for space, utilities and administrative support (provided by the school) and for personnel, equipment and supplies (provided by the Department of Health).

Last year, a comprehensive clinic was established at Central High School in Little Rock, where 36% of the 1,800 students signed up to use the clinic. Records were started for 558 students, though approximately 200 more came in for services such as condom distribution. Tests for sexually transmitted diseases were performed in 121 cases, and 52% were positive. Ten young women were found to have pre-cancerous growths of the cervix. Fourteen pregnancies were reported during the school year, but only three of those were among clinic users.[22]

College Tuition for Good Students of Poor Families

My sixth prescription calls on us to offer free college tuition and books at a state-supported school to all children with a B average or above, a good citizenship record, and a family income of $20,000 or less.

There are already several programs which attempt to encourage at-risk students to stay in school. In New York, Eugene Lang promised college tuition to students who finish high school at PS 121 in East Harlem. From this, the I Have a Dream Foundation was developed to help students in other cities gain similar opportunities.[15] Cleveland is experimenting with setting aside college tuition for high school students who achieve specific grades. In Cincinnati, the Partnership in Education, funded by the Kroger Company, rewards students with funds for college tuition.

Patrick Taylor of New Orleans studied engineering at Louisiana State University on a full-tuition scholarship. He founded an oil firm in the late 1970s. A decade later, he challenged 180 failing seventh and eighth grade students to take college preparatory courses, maintain a B average, and stay out of trouble. If they managed this, he told them, their college tuition would be paid. As the students entered their tenth and eleventh grades, two had become pregnant and several had moved out of the area. Eighty percent remained in the program.[23,24]

Taylor's plan was adopted by the state of Louisiana. Act 789 of 1989 set admissions standards and required the state to pay tuition and fees for qualified students from low and middle-income families. Approximately 500 students have already begun to take advantage of the new law, and at least 15 states have considered similar legislation.[25]

We must recognize that it is cheaper to offer young people the opportunity for a college education than it is to warehouse them in a prison system with no hope. We cannot afford to do otherwise.

In order to save this nation, we must save our children. We cannot afford to waste this generation. We must make sure that the prescriptions I have written for the 90s are filled, so that all our children can walk across the bridge out of poverty. We can change, we can make a difference, and we must try. ❑

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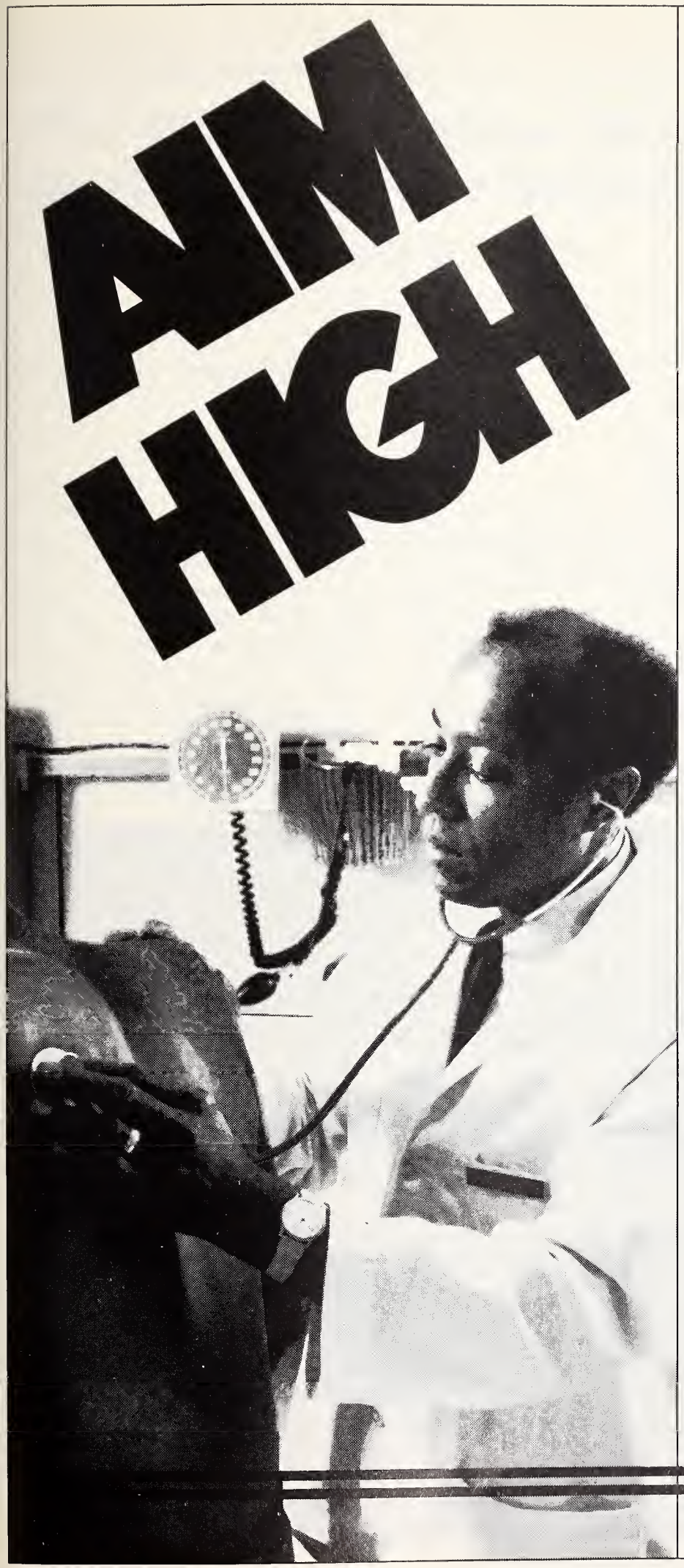
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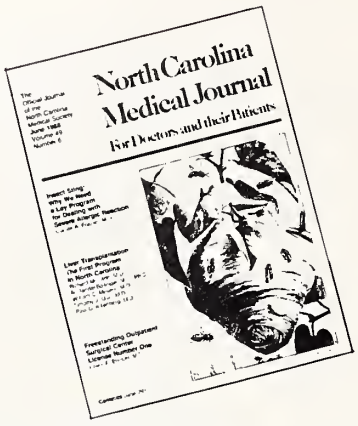
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The North Carolina Medical Society - Medical Student Section

Medical Students Getting Involved

P. Bradley Brechtelsbauer, MSIV

In March, 1988, I attended my first meeting of the North Carolina Medical Society (NCMS) and was first introduced to the Medical Student Section (MSS). Larry Nycum and I had decided that we were interested in organized medicine, but we knew very little about it. About 35 students attended, with all four North Carolina medical schools represented. The meeting focused on preparing students to become increasingly involved in the North Carolina Medical Society and the American Medical Association.

Chris Jones of East Carolina University, the chair of the MSS at that time, conducted a parliamentary workshop, including a didactic session, followed by role-playing of the more complicated scenarios. This was especially helpful for those of us who were new to the Society. There was also a leadership workshop to explore and improve our leadership abilities. Finally, the workings of the NCMS were explained to us so that we could function intelligently on the floor of the House of Delegates.

From the University of North Carolina School of Medicine, Chapel Hill 27599.

My first impression was very positive. This group of students was organized and had strong support from its parent organization, the NCMS. I enjoyed meeting students from different schools, and I was drawn to participate in an organization with such enthusiasm and broad participation. Furthermore, the NCMS was an organization that I could remain involved in even after medical school.

Immediately, I inquired about how I could get involved, and I was told about the many different ways that students could be active in the Society. I finally decided that I wished to represent my school, The University of North Carolina, on the MSS Governing Council. This council is composed of a chairperson and one representative from each of the four medical schools. The students from UNC selected me to represent our school on the Governing Council.

At our first MSS Governing Council meeting in Raleigh, I continued to learn about the MSS. We coordinated membership recruitment efforts at the four schools and formed a communication network to share community project and fund-raising ideas. The network also served to make known any specific problems or issues that needed to be addressed by the MSS. The Governing Council also facilitated the writing of resolutions (for both the NCMS and the AMA) and planned for both state and national meetings. At this first meeting, I began to realize that the NCMS-MSS was also very active at the national level. Many North Carolina students attended the AMA-MSS meetings which took place just prior to each AMA meeting.

Indeed, the NCMS-MSS had passed a resolution at an AMA-MSS meeting just one year earlier which initiated the office of Speaker of the AMA-MSS; and since that time, all three speakers have been from North Carolina (Debbi Casey of Bowman Gray, 1987-88, Chris Jones of ECU, 1988-89, and Larry Nycum of UNC, 1989-90).

The NCMS-MSS also presented several resolutions at the national meeting. Many of us testified both on our resolutions and on those from other schools. Again, I enjoyed not only participating in the meeting, but also getting to know medical students from across the country. It was exciting to think that our time and effort could actually have an impact on future healthcare policy.

After a year of serving on the MSS Governing Council and attending state and national meetings, I decided to run for Chairperson of the NCMS-MSS. I was seriously committed to the organization, and I was fortunate to be selected to lead for a year. My goals were to extend recruitment efforts and further increase involvement in the MSS. We also planned to maintain the national reputation of the NCMS-MSS as one of the more active state delegations at the AMA-MSS meetings.

The NCMS has been extremely supportive of the MSS. The financial and staff support have allowed us to have state meetings and also attend AMA-MSS meetings. Our state meetings have continued to focus on orienting new members to the workings of the Society and preparing for both NCMS-MSS and AMA-MSS meetings.

Again this year we held a leadership workshop, discussing the factors that make a good leader. Larry Nycum, the third North Carolinian to serve as speaker of the AMA-MSS, gave a parliamentary workshop. We stressed the importance of being involved in NCMS committees, and the students continued to show a lot of interest. We also held our third annual essay contest and had many excellent submissions. The winning entry[1] and another entry[2] were published in the *Journal* last year.

Another exciting event this year was having Dr. James Davis speak to our group at our NCMS-MSS meeting in Asheville (November 1989) and give his thoughts on organized medicine. He was very well received by the students.

One specific goal we had this year was to recruit new NCMS-MSS members. The AMA-MSS had just begun offering multi-year memberships at reduced rates. One problem with this, however, was that students could join the AMA without ever joining the NCMS. With this in mind, we submitted a resolution (in cooperation with the NCMS Membership Committee) that would set up a parallel system in the NCMS allowing students to join both NCMS and the AMA for two, three, or four years. The logistics of joining would remain simple; students could join both societies through the NCMS just as before, but they would be billed and pay dues only one time. The Membership Committee was very supportive, as was the rest of the Society, and the resolution passed. We believed that this was one step toward increasing membership in the student section.

To further improve membership, we sent out recruitment letters and also worked to find health insurance for medical students that provided good coverage and competitive rates.

We also produced a recruitment video, showing North Carolina medical students involved in organized medicine. This video was presented to incoming students for the first time in August of 1989. Despite all of our efforts our student membership did not improve in 1989 to 1990, but we anticipate that the efforts we have will lead to improved membership in the next two to three years.

As mentioned above, the AMA-MSS office of Speaker has been filled by a North Carolina student since its inception three years ago. Larry Nycum (UNC) did an excellent job as speaker of the AMA-MSS last year and represented our state well. Other North Carolina medical students have also held national positions. Christine Carter (ECU) has served on reference committees at two meetings. Miles Rudd (ECU) has served on the rules committee and a reference committee. Tom May (ECU) also served on a reference committee last year. It is clear that North Carolina students are representing our state well and getting involved. Miles Rudd served as chairman of a reference committee at the last interim meeting of the AMA-MSS (December, 1990), and Christine Carter was just selected to serve on the Council for Scientific Affairs for the year 1991-1992.

We have further organized our approach to the AMA meetings by holding organized morning caucuses before each assembly meeting. In the last three years, our morning caucus has evolved into an effective forum, allowing us to share opinions on various issues. This also allows us to combine our energy as a delegation to work either for or against a resolution. These meetings have also promoted unity and enthusiasm within our state MSS. Since many students are attending a national meeting for the first time, the caucus also serves to further orient students with regard to how the system functions.

Being involved in the NCMS-MSS has taught me a number of lessons. Medical students can make their opinions known, and indeed students have been at the forefront of many movements that have led to new legislation. For example, medical students started the movement to require child car-seats; then, with the support of the AMA, this led to legislation. We have also learned of the necessity for physicians to carefully study and respond to medically-related issues that face society.

The NCMS-MSS has developed a great amount of enthusiasm and momentum over the last several years. With the continued support of the NCMS staff and members, we hope to continue to make significant contributions to organized medicine. ❑

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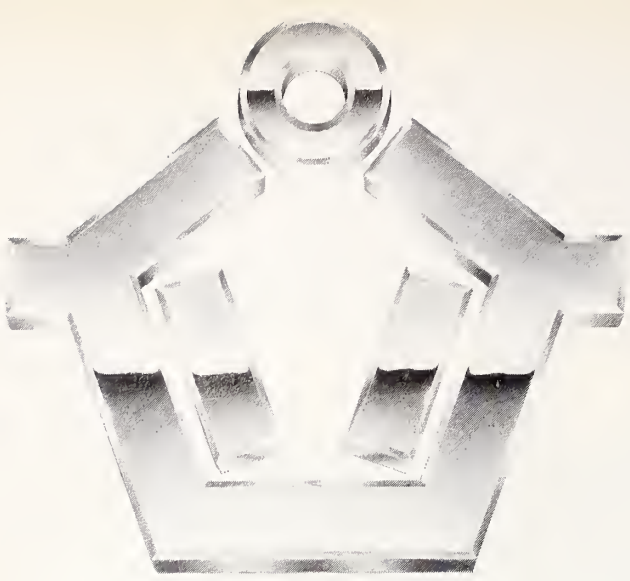


Zantac®

ranitidine HCl/Glaxo 150 mg and 300 mg tablets

Please see Brief Summary of Prescribing Information on adjacent page.

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Zantac®

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BRIEF SUMMARY

The following is a brief summary only. Before prescribing, see complete prescribing information in Zantac® product labeling.

INDICATIONS AND USAGE: Zantac® is indicated in:
1. Short-term treatment of **active duodenal ulcer.** Most patients heal within four weeks.
2. **Maintenance therapy** for duodenal ulcer patients at reduced dosage after healing of acute ulcers.
3. The treatment of **pathological hypersecretory conditions** (eg, Zollinger-Ellison syndrome and systemic mastocytosis).
4. Short-term treatment of **active, benign gastric ulcer.** Most patients heal within six weeks and the usefulness of further treatment has not been demonstrated.
5. Treatment of **gastroesophageal reflux disease (GERD).** Symptomatic relief commonly occurs within one or two weeks after starting therapy. Therapy for longer than six weeks has not been studied.

In active duodenal ulcer; active, benign gastric ulcer; hypersecretory states; and GERD, concomitant antacids should be given as needed for relief of pain.

CONTRAINDICATIONS: Zantac® is contraindicated for patients known to have hypersensitivity to the drug.

PRECAUTIONS:

General: 1. Symptomatic response to Zantac® therapy does not preclude the presence of gastric malignancy.

2. Since Zantac is excreted primarily by the kidney, dosage should be adjusted in patients with impaired renal function (see DOSAGE AND ADMINISTRATION). Caution should be observed in patients with hepatic dysfunction since Zantac is metabolized in the liver.

Laboratory Tests: False-positive tests for urine protein with Multistix® may occur during Zantac therapy, and therefore testing with sulfosalicylic acid is recommended.

Drug Interactions: Although Zantac has been reported to bind weakly to cytochrome P-450 *in vitro*, recommended doses of the drug do not inhibit the action of the cytochrome P-450-linked oxygenase enzymes in the liver. However, there have been isolated reports of drug interactions that suggest that Zantac may affect the bioavailability of certain drugs by some mechanism as yet unidentified (eg, a pH-dependent effect on absorption or a change in volume of distribution).

Carcinogenesis, Mutagenesis, Impairment of Fertility: There was no indication of tumorigenic or carcinogenic effects in lifespan studies in mice and rats at doses up to 2,000 mg/kg/d.

Ranitidine was not mutagenic in standard bacterial tests (*Salmonella, Escherichia coli*) for mutagenicity at concentrations up to the maximum recommended for these assays.

In a dominant lethal assay, a single oral dose of 1,000 mg/kg to male rats was without effect on the outcome of two matings per week for the next nine weeks.

Pregnancy: ***Teratogenic Effects: Pregnancy Category B:*** Reproduction studies have been performed in rats and rabbits at doses up to 160 times the human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Zantac. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: Zantac is secreted in human milk. Caution should be exercised when Zantac is administered to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

Use in Elderly Patients: Ulcer healing rates in elderly patients (65 to 82 years of age) were no different from those in younger age groups. The incidence rates for adverse events and laboratory abnormalities were also not different from those seen in other age groups.

ADVERSE REACTIONS: The following have been reported as events in clinical trials or in the routine management of patients treated with Zantac®. The relationship to Zantac therapy has been unclear in many cases. Headache, sometimes severe, seems to be related to Zantac administration.

Central Nervous System: Rarely, malaise, dizziness, somnolence, insomnia, and vertigo. Rare cases of reversible mental confusion, agitation, depression, and hallucinations have been reported, predominantly in severely ill elderly patients. Rare cases of reversible blurred vision suggestive of a change in accommodation have been reported.

Cardiovascular: As with other H_2-blockers, rare reports of arrhythmias such as tachycardia, bradycardia, atrioventricular block, and premature ventricular beats.

Gastrointestinal: Constipation, diarrhea, nausea/vomiting, abdominal discomfort/pain, and rare reports of pancreatitis.

Hepatic: In normal volunteers, SGPT values were increased to at least twice the pretreatment levels in 6 of 12 subjects receiving 100 mg qid intravenously for seven days, and in 4 of 24 subjects receiving 50 mg qid intravenously for five days. There have been occasional reports of hepatitis, hepatocellular or hepatocanalicular or mixed, with or without jaundice. In such circumstances, ranitidine should be immediately discontinued. These events are usually

Zantac® 150 and 300 (ranitidine hydrochloride) Tablets
Zantac® (ranitidine hydrochloride) Syrup

reversible, but in exceedingly rare circumstances death has occurred.

Musculoskeletal: Rare reports of arthralgias.

Hematologic: Blood count changes (leukopenia, granulocytopenia, thrombocytopenia) have occurred in a few patients. These were usually reversible. Rare cases of agranulocytosis, pancytopenia, sometimes with marrow hypoplasia, and aplastic anemia have been reported.

Endocrine: Controlled studies in animals and man have shown no stimulation of any pituitary hormone by Zantac and no antiandrogenic activity, and cimetidine-induced gynecomastia and impotence in hypersecretory patients have resolved when Zantac has been substituted. However, occasional cases of gynecomastia, impotence, and loss of libido have been reported in male patients receiving Zantac, but the incidence did not differ from that in the general population.

Integumentary: Rash, including rare cases suggestive of mild erythema multiforme, and, rarely, alopecia.

Other: Rare cases of hypersensitivity reactions (eg, bronchospasm, fever, rash, eosinophilia), anaphylaxis, angioneurotic edema, and small increases in serum creatinine.

OVERDOSAGE: Information concerning possible overdosage and its treatment appears in the full prescribing information.

DOSAGE AND ADMINISTRATION: (See complete prescribing information in Zantac® product labeling).

Active Duodenal Ulcer: The current recommended adult oral dosage is 150 mg or 10 ml (2 teaspoonfuls equivalent to 150 mg of ranitidine) twice daily. An alternate dosage of 300 mg or 20 ml (4 teaspoonfuls equivalent to 300 mg of ranitidine) once daily at bedtime can be used for patients in whom dosing convenience is important. The advantages of one treatment regimen compared to the other in a particular patient population have yet to be demonstrated.

Maintenance Therapy: The current recommended adult oral dosage is 150 mg or 10 ml (2 teaspoonfuls equivalent to 150 mg of ranitidine) at bedtime.

Pathological Hypersecretory Conditions (such as Zollinger-Ellison syndrome): The current recommended adult oral dosage is 150 mg or 10 ml (2 teaspoonfuls equivalent to 150 mg of ranitidine) twice a day. In some patients it may be necessary to administer Zantac® 150-mg doses more frequently. Doses should be adjusted to individual patient needs, and should continue as long as clinically indicated. Doses up to 6 g/d have been employed in patients with severe disease.

Benign Gastric Ulcer: The current recommended adult oral dosage is 150 mg or 10 ml (2 teaspoonfuls equivalent to 150 mg of ranitidine) twice a day.

GERD: The current recommended adult oral dosage is 150 mg or 10 ml (2 teaspoonfuls equivalent to 150 mg of ranitidine) twice a day.

Dosage Adjustment for Patients with Impaired Renal Function: On the basis of experience with a group of subjects with severely impaired renal function treated with Zantac, the recommended dosage in patients with a creatinine clearance less than 50 ml/min is 150 mg or 10 ml (2 teaspoonfuls equivalent to 150 mg of ranitidine) every 24 hours. Should the patient's condition require, the frequency of dosing may be increased to every 12 hours or even further with caution. Hemodialysis reduces the level of circulating ranitidine. Ideally, the dosage schedule should be adjusted so that the timing of a scheduled dose coincides with the end of hemodialysis.

HOW SUPPLIED: Zantac® 300 Tablets (ranitidine hydrochloride equivalent to 300 mg of ranitidine) are yellow, capsule-shaped tablets embossed with "ZANTAC 300" on one side and "Glaxo" on the other. They are available in bottles of 30 (NDC 0173-0393-40) tablets and unit dose packs of 100 (NDC 0173-0393-47) tablets.

Zantac® 150 Tablets (ranitidine hydrochloride equivalent to 150 mg of ranitidine) are white tablets embossed with "ZANTAC 150" on one side and "Glaxo" on the other. They are available in bottles of 60 (NDC 0173-0344-42) and 100 (NDC 0173-0344-09) tablets and unit dose packs of 100 (NDC 0173-0344-47) tablets.

Store between 15° and 30° C (59° and 86° F) in a dry place. Protect from light. Replace cap securely after each opening.

Zantac® Syrup, a clear, peppermint-flavored liquid, contains 16.8 mg of ranitidine hydrochloride equivalent to 15 mg of ranitidine per 1 ml in bottles of 16 fluid ounces (one pint) (NDC 0173-0383-54).

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Edward C. Halperin, M.D., Book Review Editor

***Medical School Admissions: The Insider's Guide*, by John A. Zebala, M.D., and David B. Jones, M.D. Mustang Publishing, 1989, 188 pages, paperback.**

Reviewed by Carolyn Ferree, M.D., Bowman Gray School of Medicine, Winston-Salem 27103.

Although there has been a recent decline in the number of applicants to medical schools, there are still more than 30,000 applications for the 17,000 positions available each year at 127 U.S. medical schools, therefore admission to medical school continues to be quite competitive.

This easy-to-read handbook, written by two medical students who recently matriculated at Cornell University, contains an organized presentation of step-by-step suggestions for successful medical school application and admission. There is a specific timetable for the entire process, beginning with a review for the MCAT examination early in the Junior year and ending with the acceptance letter in the senior year.

The first two chapters include advice on premedical preparation, such as picking the "right" undergraduate school and development of appropriate study habits. One section is devoted to developing techniques for higher grades, but at no time do the authors give the impression that any of the process can be short-circuited.

Chapter three outlines information regarding the specifics of the MCAT exam and includes tips on preparing to take it. Unfortunately, the old MCAT is being replaced by a newer, more comprehensive examination, causing this section to become rapidly outdated, The preparatory advice continues to be sound, however.

The detailed discussion of the application process in chapter four will be of benefit to anyone contemplating application to medical school. A section on financial aid is included, as well as a ranking of U.S. medical schools. The ranking is a little misleading, however, since private and state schools are mixed.

The fifth chapter is devoted to the art of interviewing, and most of the information is appropriate and accurate. The reference to only two interviewers, either two faculty members or one faculty member and one student, is inaccurate for some medical schools. Many schools, including Bowman Gray, use three faculty interviewers plus student tours, which provide additional feedback about the prospective student. This chapter also includes a fairly extensive list of sample interview questions to serve as food for thought and digestion.

The last chapter deals with the essay and offers many good suggestions, especially the advice to avoid plagiarism. This section emphasizes the importance of a coherent central theme, neatness, proofreading, and grammar. Although creativity is encouraged, frank weirdness is discouraged, Egotism is also discouraged, but a positive attitude is emphasized. Also included are 50 sample AMCAS essays collected from students who have successfully matriculated, The authors identify both the strong and weak points in each essay as they see them. In general prospective students are encouraged to be themselves as they write essays and express as coherently as possible their motivation for entering medicine. Articulating these goals is important in the interview process; hence thinking them through while writing an essay establishes an excellent foundation for the future interview.

I expected this book to reduce the admissions process to the status of a game, implying that anyone who knows all the rules and tricks can succeed. However, I was pleasantly surprised by the accurate information overall and the emphasis on preparation, hard work, tenacity, and positivity. Reading this book before the process begins should enable the student to organize more effectively, which in turn should lead to more confidence and a more enjoyable experience.

From the Division of Radiation Oncology, Box 3085, Duke University Medical Center, Durham 27710.

***The Development of American Gastroenterology*, by Joseph B. Kirsner, M.D., Ph.D., M.A.C.P. New York: Raven Press, Ltd. 480 pages.**

Reviewed by Juan Alva, M.D., 609 Vickers Ave., Durham 27701.

This is the first book on the history of American gastroenterology written by a distinguished Professor of Medicine of the University of Chicago. Undoubtedly, Dr. Kirsner has the credentials proper for

his position; however, is he qualified as an historian of medicine? He is a man of 80 who has lived all of the dramatic changes in gastroenterology, from the use of antacids to H_2 receptor antagonists and omeprazole, to the introduction of flexible endoscopy. Furthermore, he has seen all of these changes from the vantage point of the front row as well as an active participant.

Dr. Kirsner knew well when he set out to write the history of American gastroenterology that this would be a first; thus he decided to write an encyclopedic account from seventeenth century America to modern gastroenterology in 480 pages! As such the book abounds in tables and names of gastroenterologists who have had some relevance in the field. The originality of his purpose in finding the historical development of gastroenterology is hampered by the abundance of irrelevant material; the first 56 pages add little or even detract from his purpose; Indian medicine and the medical conditions in colonial America have little to do with American gastroenterology.

We can answer the question—is he a qualified historian of medicine?—*yes*, although he lacks the finesse of A. McGhee Harvey, the Professor of Medicine at Johns Hopkins turned historian in his later years. Obviously Kirsner's project was too ambitious in its attempt to encompass all of the American plus some European gastroenterology in such a small book.

The Development of American Gastroenterology has some outstanding chapters, specifically Early Twentieth Century (chapter 4). Also the work of early pioneers from William Beaumont to Walter B. Cannon is very well treated. Dr. Kirsner is heavy on digestive disease as a national problem, the celebrated conferences at the National Institutes of Health from 1967 to 1974, which did so much to provide federal funding for gastroenterological research.

I found the book excellent as a source of reference material; however, some glaring absences deserve mention: i.e., the superficial treatment of Stewart Wolf's experiments on Tom, the patient with a gastric fistula, compared by great physiologists such as Walter Cannon to Beaumont's original observations on Alexis St. Martin; and the total exclusion of the contribution of the Armed Forces Institute of Pathology in Washington D.C. to liver histopathology. This is perhaps the best center in the world for liver histopathology an is not even mentioned in the book.

In general *The Development of American Gastroenterology* is highly recommended for all subspecialists whether in academia or private practice. It paints the history of our field with vigor and nostalgia from early times to modern days; and who knows—many will find the name of their chief when they were fellows! ❑



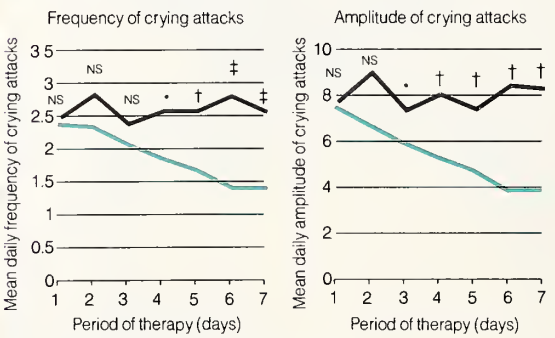
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1. Kanwaljit SS, Jasbir KS. Simethicone in the management of infant colic. *Practitioner.* 1988;232:508.

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Aphorisms of the Month
A New Venture

Henry McIntosh, the director of the Duke Cardiovascular laboratory, always posted the "Aphorism of the Day." I enjoyed them greatly. We are going to fill in blank spaces in the Journal with "Aphorisms of the Month." Daniel Sexton, Associate Professor of Medicine at Duke, will edit this section.

Experience

Life is short and the art is long, the occasion fleeting, experiences fallacious and judgment difficult.

Hippocrates

It is common error to think the more a doctor sees, the greater his experience and the more he knows.

William Osler

Experience is often the repetition of error. It is the quality of experience that is decisive. One is reminded of Napoleon's mules: they had seen a hundred campaigns but they were still mules.

P.H. Spodick

Good judgment comes from experience; experience comes from bad judgment.

Anonymous



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Letters to the Editor

Thanks for the memories: Three comments on Dr. Graham's articles on the "old" and "new" UNC School of Medicine

To Dr. Graham:

Thanks very much for sending me the reprints of the papers on our class (NCMJ 1990;51:628-34; and 1991;52:44-9). They brought back many fond memories of our class and faculty, most of which were long forgotten. I especially enjoyed hearing about Dr. Berryhill. He was truly a "southern" gentleman and scholar, and also a very caring person. He went out of his way to assist Amelia Hecht through her fatal illness—before and after our marriage.

I also enjoyed seeing pictures of Drs. Rosenau and Brown with whom I had the pleasure of working. It was Dr. Rosenau who furthered my interest in tropical medicine in which field I served for four years in the army.

You sound as if you are aging gracefully and healthily. I retired from private practice ten years ago and am working part-time in our Health Department caring for infants and children. I love it!

Albert J. Sheldon, M.D.
2011 N. Louise St.,
Santa Ana, CA 92706

To Dr. Graham:

Thanks very much for the reprints from the *North Carolina Medical Journal*. Since I retired and am not active in the Medical Society I rarely see the *Journal*.

Those articles brought to mind people and events I hadn't thought of in many years.

They also caused me to be grateful that we were privileged to know and be taught both didactically and by example by some truly outstanding people.

Walter C. Hilderman, M.D.
1724 Brandon Road
Charlotte, NC 28207

To Dr. Graham:

Many thanks for the reprints. You are most thoughtful and generous to your old classmates. I enjoyed the articles very much and am keeping them for posterity.

Now that you have closed your office, I expect your literary talents to flourish!

John Woltz, M.D.
916 Cherokee Rd.
Charlotte 28207

Resource-Based Relative Value Scale

To the Editor:

When the Resource-Based Relative Value Scale first came onto the health policy scene, physicians supported it because it would introduce fairness and rationality into the Medicare payment system, unite the medical profession, and, most of all, because it would be good for patients. But lately, I've been hearing many of my colleagues say they've become disillusioned with the RBRVS implementation—they don't trust the federal government to live up to its end of the bargain.

Well, I don't trust the federal government to live up to its bargain either—at least not without concentrated pressure to do so. But I don't think the medical profession should write off the RBRVS. Despite many problems—some immediate and some potential—it still will do what it was intended to do.

For instance, under, the RBRVS, relative values are expected to increase substantially for most evaluation and management (E/M) services. Skeptics have suggested that the RBRVS will be used only to cut surgical values—and fees. New estimates show, however, that the RBRVS will increase relative values for E/M services by 30% on average, and that, as a result, Medicare payments for these services still will increase substantially above 1991 payments under a "budget neutral" RBRVS fee schedule.

Better yet, the RBRVS protects undervalued evaluation and management services provided by all physicians *even when the budget is cut*. Consider what would happen to a $30 office visit from 1991 to 1996 under a purely hypothetical scenario in which fees normally would have been given a 15% inflation update, but Congress cuts payments 10% below inflation. In 1996, that same office visit fee would total $31.05 without the RBRVS. With the projected 30% gain for E/M services expected under the RBRVS, it would total $40.36. Especially in this budget-cutting climate, the RBRVS will protect fees for the E/M services all physicians provide.

Exactly what effect there will be on an individual's practice depends on several factors, however. Because of elimination of geographic differentials and limits on balance billing, for some there will be no actual gain (or even a reduction) for E/M services. Where physicians practice, how often they accept assignment, how much they charge in excess of Medicare's "approved amount" for unassigned claims and their mix of services will determine the effect on their practices. *But regardless of each individual's gain or loss, the RBRVS will enhance payments overall for physicians' E/M services compared with what would have been.*

Another benefit is that the RBRVS allows physicians to unite for a fair conversion factor and to oppose further cuts in the Medicare program, rather than engaging in internal squabbling. The conversion factor that makes the RBRVS into a real fee schedule applies to *all* physicians services. That means the entire profession has a stake in making sure it's fair and an incentive to work *together* to stave off future Medicare cuts. In fact, every medical group that testified before the Physician Payment Review Commission last December, including the American Medical Association, the American Society of Internal Medicine, the American Academy of Family Physicians and the American College of Surgeons, opposed HCFA's proposal to lower the conversion factor to make up for that assumed increase.

The RBRVS also provides a basis for opposing unfair cuts in specific procedures. For example, the profession can argue that the ban on reimbursement for most ECG interpretation is contrary to the RBRVS, because the study said the service indeed has a value. The influential Physician Payment Review Commission agrees, giving the profession a real opportunity to get this cut reversed. Without the RBRVS, it would have been far more difficult to make that case.

Continued support for the RBRVS allows the profession to be *for*—not just against—something. If it wasn't for the medical profession's support for the RBRVS, we'd all be worse off. No one can say that change wasn't coming. Those who don't like the RBRVS and limits on balance billing should consider the alternatives: mandatory assignment, MDDRGs, and fees set by the government without any professional input. The RBRVS gives the profession a voice—and it enabled us to ward off more objectionable measures.

Finally and most important, *the RBRVS is good for our patients.* It will increase the emphasis on preventive care and on evaluating and managing their treatment, and decrease the emphasis on costly high-tech services. It also will help improve access to care in underserved rural areas.

So you see, to paraphrase Mark Twain, reports of the death of the RBRVS are greatly exaggerated. But medicine can't rely on trust that everything will turn out okay. We must fight to preserve the promise of physician payment reform.

That means opposing policies that will undermine the RBRVS (such as a behavioral assumption that would lower the fee schedule conversion factor). It means working to change policies—such as the ban on reimbursement for ECG interpretation—that give with one hand and take away with the other. And it means supporting further changes that will make the system even better.

The RBRVS unites physicians under one fair and rational payment system to fight future detrimental budget cuts in Medicare. Lawmakers faced with a divided house of medicine easily can use that division to cut Medicare payments even further. But if they're faced with a profession that's united under the RBRVS, it won't be so easy.

Support for the RBRVS has been right—for our profession and for our patients. The RBRVS will protect undervalued evaluation and management ices in an era of Medicare budget cutting, increase access and the emphasis on preventive care for patients, and introduce fairness into the Medicare payment system. *But we must fight together—as a profession—to make sure it is implemented in the way Congress intended.*

Robert W. Carter, M.D.
President, NC Society of Internal Medicine
Raleigh, NC 27611

Comment on Dr. Edell's article on the high tech newborn

To the Editor:

"The Financial Impact of the High Technology Newborn" (Edell et al. NCMJ 1991;52:97-9) contained excellent information on the long-term costs of caring for low birthweight infants.

However the article contained statements which were unscientific and undocumented. It asserts that our high incidence of low birth weight can mostly be explained by the "social, demographic, ethnic and educational diversity of the United States." This is a commonly repeated misconception. Dr. C. Arden Miller, of the School of Public Health at University of North Carolina, notes that the European countries with which our statistics compare unfavorably, in fact have quite heterogenous populations. Many of these countries have a large proportion of foreign-born residents, many from the Middle East or Africa. In Amsterdam in 1981, 44.5% of children under five were born to families of foreign origin, mainly from Surinam or Morocco.[1]

The article also states "many of the individuals who need prenatal care the most are not motivated to receive it." As far as I know this alleged lack of motivation is not an inborn, immutable characteristic. In fact, numerous studies have demonstrated a decrease in low birthweight rates by improving compliance with prenatal care. For instance, the Resource Mothers Program in South Carolina, which links pregnant teenagers with an older mother who provides education and support, demonstrated improved attendance at prenatal care visits and a decreased low birthweight rate in participating teenagers compared to a control group. Similarly, in our own state, the maternity care coordination services of the Babylove program resulted in improved compliance with prenatal care and decreased low birthweight.

In recognition of the need for such interventions in conjunction with good medical care, contemporary prenatal care addresses psychosocial factors, especially for high-risk mothers. The Public Health Service Expert Panel on the Content of Prenatal Care[2] emphasized this point. This is accomplished by providing social support, not by labelling a group of pregnant women unmotivated.

As the authors demonstrated, low birthweight is a tragic problem, not only because of the resulting infant mortality but also because of the large numbers of surviving sick infants whose disabilities were preventable. We distract ourselves

when we focus on "diversity" and "motivation," which suggest that the problem is insoluble. Instead we should focus on the many successful models for decreasing low birthweight and infant mortality.

Jessica Schorr Saxe, M.D.
2216 Dilworth Rd. W.
Charlotte, NC 28203

1 Miller CA. Prenatal Care Outreach: An International Perspective, in Institute of Medicine: Prenatal Care, 1988.
2 Caring for Our Future: The Content of Prenatal Care. Public Health Service, Department of Health and Human Services, 1989.

Dr. Edell's response:

This is in response to the letter to the Editor by Jessica Schorr Saxe, M.D. Dr. Saxe points out some important and interesting points, although I feel they do not directly parallel my article. First and foremost, the issue regarding premature low birthweight is multifactorial, and my statement was that the medical community itself is not by any means entirely responsible for reducing such a situation. For example, to document scientifically why a mother who is an IV drug abuser and/or crack addict does not seek medical care would be extremely difficult if not impossible. I merely tried to emphasize that prenatal care is available for those who wish to seek it. The medical community has the facilities, technology, and in most cases financial resources to handle the burden thrust upon it.

Dr. Saxe points out that in various countries such as Holland a large proportion of their live births are of foreign origin and therefore those populations are not homogeneous. The key issue is that adjusted for birth weight the neonatal mortality rate in the United States is among the lowest in the world but at the greatest cost. Simply stated, one must compare "apples to apples, oranges to oranges." Various countries use different criteria for defining a live birth. Around 15% to 17% of our neonatal mortality are in those infants born less than 550 grams which other countries do not factor into their live birth rates.

Although I'm not familiar with the Babylove program, it is encouraging that such services do exist in the state of North Carolina. I am sure that there are similar services in other states in the union. Nearly all of us in the health care profession would like to see a significant decrease in the incidence of prematurity and low birth weights. By reducing these factors, we would be able to reduce mortality and morbidity substantially. It is unfortunate that in such a civilized world, many of our children are without vaccinations and without prenatal care for whatever reasons. Although in this regard some of the responsibility directly rests on the politicians who dictate policy. For example, two hours of Operation Desert Shield would cover health care costs to vaccinate every child in the United States of America. Our ultimate goal is decreasing the incidence of prematurity and low birth weight. The expectant mother must accept some responsibility towards adequate prenatal evaluation for her unborn child thus facilitating a more cooperative relationship with society.

Dean Scott Edell, M.D., M.P.H.
Fellow in Pediatric Pulmonology
Duke University Medical Center
Durham 27710

Comment on Dr. Nesbitt's article on Multiple Sclerosis

To Dr. Nesbitt:

Your article (NCMJ 1991;52:85-7) was deeply appreciated. I am an MS patient also and though I am 20 years your senior, there are many parallels between our cases. I first came to North Carolina six and a half years ago because my wife, who is an R.N., wanted to get her Masters in Public Health. I had been a busy family doctor in a small town in Illinois and was lucky enough to get a job in a practice in Hillsborough associated with UNC-Chapel Hill. When I first developed slurred speech and an unsteady gait, I knew immediately my probable diagnosis. I am thin, normotensive, a non-smoker and have two living parents. A thorough evaluation including an MRI confirmed MS and I have had slow progression and am now retired. I still go to the Family Practice Center at UNC each morning and precept and read ECGs until fatigue tells me it is time to come home.

I spent the early part of my illness trying to diffuse the anger and chagrin of my three children. I have had great support from my wife and colleagues. I do miss greatly jogging, softball, skiing and delivering babies, but fortunately I love to read and listen to music.

My oldest son graduated from NC State University Veterinary School last May, was married in October, and is now practicing small animal medicine in a group in Charlotte. My youngest son is a junior in Vet School at the University of Illinois. My daughter, aged 27, in Indianapolis is now in the process of applying for med school.

I hope I haven't bored you with all this, but I just wanted to write. Your last paragraph about optimism and an interest in life was especially appreciated. If you ever feel the need to hear from a kindred spirit, please let me know.

Joe Shackelford, M.D.
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Wilson

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Barbara Lea Tenney (PD), 200 Richards St., Wilson 27893

Continuing Medical Education

May 17
42nd Scientific Sessions, American Heart Association, North Carolina Affiliate - Morning Sessions - "Cardiovascular Epidemiology in North Carolina"; Afternoon Sessions - Cardiac Arrhythmias"
Place: Research Triangle Park
Credit: TBA
Info: Alice Toth, American Heart Association, P.O. Box 2636, Chapel Hill 27515. 919/968-4453 or 1-800/331-6601

May 17-18
Home Care for the Technology Dependent Child With an Emphasis on Respiratory and Gastrointestinal Problems
Place: Durham
Credit: CME hours pending
Fee: $125
Info: Iley B. Browing, III, M.D., Assistant Professor of Pediatrics, Duke University Medical Center, Box 2994, Durham 27710

May 29
Laboratory and Clinical Development of Hematopoietic Colony-Stimulating Factors
Place: Durham
Credit: 4 hours Category I, AMA
Info: William P. Peters, M.D., Ph.D., Duke University Medical Center, Box 3961, Durham 27710. 919/684-6707

May 30 - June 2
Procedural Skills For the Family Physician-Office Gynecology
Place: Greenville
Credit: Hours TBA - Category I, AMA
Info: Mary C. Valand, Office of Continuing Medical Education, Box 7224, Greenville 27835-7224. 919/551-5200

June 3-6 (one day each)
Risk Management: In Practice
Place: Asheville, Raleigh, Charlotte, and Hickory, respectively
Credit: 2 hours Category I AMA
Fee: None
Info: Dianne Reinoso, Loss Prevention Manager, Medical Mutual Insurance Co. of NC, P.O. Box 26088, Raleigh 27611. 800/662-7917, 919/828-9334

June 7-8
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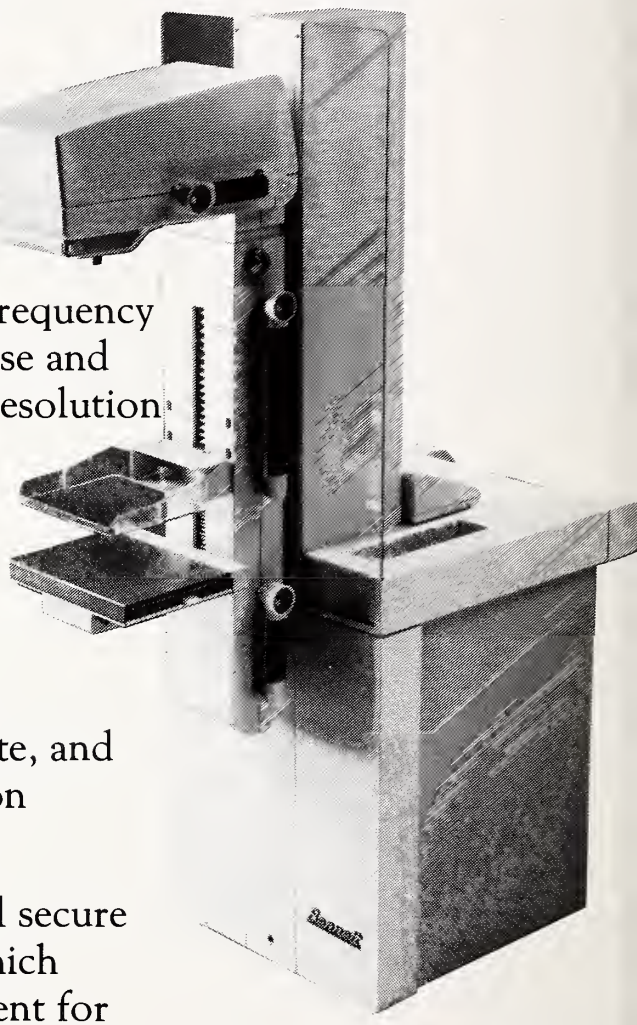


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by Marvin P. Rozear, M.D.

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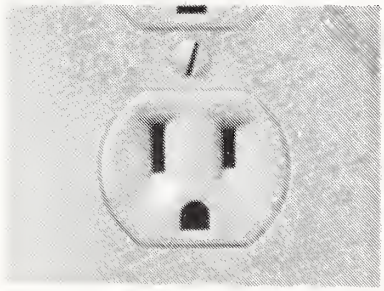


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For Doctors and their Patients

June 1991, Volume 52, Number 6

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North Carolina Medical Journal

FOR DOCTORS AND THEIR PATIENTS

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The Development of a Comprehensive Cancer Center

A Concerted Effort Spearheaded by Charles L. Spurr, M.D.

M. Robert Cooper, M.D.

"Two roads diverged in a yellow wood, and
sorry that I could not travel both ..."
—Robert Frost

The Cancer Center of Wake Forest University's Bowman Gray School of Medicine received designation as a Comprehensive Cancer Center in August of 1990. This recognition by the National Cancer Institute applies to clinical centers that not only conduct basic research and clinical trials but that also engage in cancer control, cancer information and education services, and community outreach activities. Achievement of this status by the Cancer Center represents the culmination of more than two decades of commitment to improving care for the patient with cancer.

Although many individuals have participated in the development of this Cancer Center, the major leadership for the process was provided by Dr. Charles L. Spurr. Since its inception in 1971, the Cancer Center has grown from a fledgling activity supported by a total of three clinical oncologists to an effort encompassing 114 faculty members from 16 medical center departments.

From the Department of Medicine, Section on Hematology/Oncology, Bowman Gray School of Medicine, Winston-Salem 27103.

Dr. Spurr's vision for the development of a Cancer Center at Bowman Gray grew out of his pioneering work in the relatively new field of cancer chemotherapy. Nitrogen mustard was the first effective cytotoxic agent for the treatment of neoplastic diseases, and Dr. Spurr wrote the first clinical protocol for the use of this drug, executed at the University of Chicago in the mid 1940s.[1]

Dr. Spurr joined Chicago's Department of Medicine, headed by Dr. George R. Dick as a medical resident from the University of Rochester School of Medicine. In the three-year sequence of Dr. Spurr's residency, Dr. Leon Jacobson, now Dean Emeritus of the Division of Biological Sciences at the University of Chicago, was Dr. Spurr's Chief Resident and collaborator in hematological efforts in the Hematology Section of the Department.

At this time the University of Chicago housed major research projects focusing not only on the development of atomic energy and the atom bomb but also on chemical warfare. The chemical warfare group had a natural interest in mustard gas[2] and was attempting to produce antidotes to the local and systemic toxicities of the mustard compounds. In early 1942, Dr. Gusman-Barron, a biochemist with the chemical warfare group, conducted a seminar at Chicago primarily reviewing the inhibitory effects of nitrogen mustard on various enzymatic pathways. During this seminar, incidental reference was made to the marked lymphopenia observed in patients exposed to mustard gas, prompting Drs. Spurr and Jacobson to consider the possible use of nitrogen mustard in the treatment of lymphoproliferative diseases.[3]

Dr. Spurr's clinical protocol for the treatment of lymphomas with nitrogen mustard was soon adopted by several other groups in the United States: Gilman and Goodman at the Yale New HavenHospital, Dr. Wintrobe at Johns Hopkins, and Dr. Dameshek in Boston. Studies concerning the mustard compounds were classified as confidential by the Chemical Warfare Services, so the early results of Drs. Spurr's and Jacobson's work could not be immediately published in the open literature. In April, 1946, Gilman and Phillips were the first to report publicly the results of their work with mustard compounds.[4] In October of that same year, Drs. Jacobson and Spurr along with others in the Chicago group published the results of their clinical work, emphasizing that the mustard compounds were frequently effective in treating Hodgkin's disease after radiation therapy had become ineffective.[1]

This early experience with the use of nitrogen mustard in the treatment of Hodgkin's disease was followed by a report in 1950 wherein Dr. Spurr and his colleagues documented the activity of the compound in 57 unselected cases of this malignancy.[5] Again, they documented the ability of nitrogen mustard to produce tumor regression after radiation therapy had failed, and suggested a multidisciplinary approach to the treatment of Hodgkin's disease, combining radiation therapy and nitrogen mustard.

Dr. Spurr's interest in the treatment of lymphomas continued, and in 1968, he and Dr. Carbone proposed that combination chemotherapy might prove to be more effective than single agent therapy.[6] Moreover, Dr. Spurr hypothesized that delivering several chemotherapeutic agents simultaneously would be more effective than giving drugs sequentially. These ideas found verification in an early report in 1970 from the National Cancer Institute that the four-drug combination of MOPP produced an 80% complete remission rate in Hodgkin's disease, and that these remissions were durable.[7] The curability of advanced Hodgkin's disease by combination chemotherapy has now been established in numerous studies.[8,9]

Dr. Spurr joined the faculty of the Bowman Gray School of Medicine in 1957, where he continued to pursue his interest in the development of therapy for neoplastic disease. The use of cytotoxic drugs for the treatment of cancer at this time had many skeptics and critics, which motivated Dr. Spurr to persist in the discipline of clinical trials. Moreover, in the 1960s it became clear to Dr. Spurr that a large body of information regarding the diagnosis and treatment of cancer was becoming available but was not being transferred to physicians and patients in small communities and rural areas. Therefore, the medical center at Bowman Gray began an outreach program targeting small hospitals and their staffs throughout western North Carolina, Tennessee, and Virginia. The idea was to provide consultation regarding management of the individual with cancer in small communities desiring to improve their ability to deliver this type of care.



Charles L. Spurr, M.D.

This activity was strongly supported by the Area Health Education Center (AHEC) which arranged for consulting physicians from Bowman Gray to be transported to a variety of rural locations by the University of North Carolina Flying Service. The single-prop planes used for this purpose were also used by UNC-Chapel Hill basketball recruiters, and it was not uncommon for a faculty member from Bowman Gray to deliver a talk at a small hospital in western North Carolina and return home along with one of the coaches.

The Piedmont Oncology Association

In 1976 this outreach program was formalized with the formation of the Piedmont Oncology Association (POA). Not only was the outreach program to continue its consultative work, but now the POA would serve as a vehicle for coordinating clinical trials research among community oncologists in the Piedmont regions of North and South Carolina as well as Virginia, Tennessee, and Georgia.

This venture proved to be highly successful because an increasing number of well-trained oncologists had established themselves within this geographical area, and many of them expressed remarkable enthusiasm for participating in

Dr. Charles L. Spurr

The Man Who Is More Than a Successful Professional

In recent years students of physician behavior have studied the problems of professionals who, without being type A personalities, still become very much focused on their professional life. Watching Charles L. Spurr live his life gives us his answer to this problem.

Dr. Spurr has balanced his professional life with hobby activities that have an interesting continuity with those of his parents, and that he shared with other members of his family. Gardening was always a focus of activity in the family home in central Pennsylvania. It has provided Dr. Spurr with an activity in which he can become absorbed quickly and maintain continuity of development despite interruptions.

Dr. Spurr's early gardening activities involved outdoor projects in azalea culture and perennial gardening. In the last two decades, orchid care has become a focus with the maintenance of a cool greenhouse for Cymbidium orchid care and a warm greenhouse for Cattleya and related tropical species.

Dr. Spurr's gardening has had a number of other benefits. It has produced blooms for a variety of social activities, a focus for travel to international gardens, a vehicle for photographic interest, and a family focus.

Dr. Spurr has a son, Dr. Charles L. Spurr, Jr., a gastroenterologist in Augusta, Georgia; a daughter, Susanne Green of Nashville, Tennessee; and four grandchildren.

clinical trials. The POA grew to 106 members serving a referral area of some 90,000 square miles with a population of 9.4 million. Currently, the POA sees approximately 7,000 new cases of cancer annually. Since 1976 it has placed more than 5,000 patients on clinical trial studies and has made contributions to over 50 publications in national journals.

In July, 1981, the POA was funded as a regional cooperative group by the National Cancer Institute. This funding continued through 1987, when the NCI made a major policy change that shifted its emphasis from the support of regional cooperative groups to the development of community-based clinical oncology trials programs (CCOPs). Such a change in policy worked to the advantage of the Cancer Center at Bowman Gray because of the previous efforts of the POA to nurture community oncology programs. In June, 1987, the NCI funded the Southeast Cancer Control Consortium, which consisted initially of eleven communities within the catchment area of the POA and later expanded to 14.

Accrual of patients to clinical trials from this CCOP is now the largest in the country. Not only does the program conduct clinical trials investigating cancer treatment, but it has expanded into the execution of trials whose focus is cancer prevention. The POA continues its consultative and educational functions, particularly in those communities without the size or resources to qualify for CCOP funding.

It is clear that much of Dr. Spurr's vision for the dissemination of improved treatments for the patient with cancer has been realized locally and adopted nationally. In 1982, subsequent to Dr. Spurr's retirement, Dr. Robert L. Capizzi was named as the new director of the Cancer Center at Bowman Gray. Dr. Capizzi brought with him a strong background in basic cancer research which, combined with his organizational skills, facilitated the continued growth of the Cancer Center. Critical to its recent designation as a comprehensive Cancer Center has been Dr. Capizzi's support of a Cancer Prevention Program. The Cancer Center's outreach program, which involves more than 100 community oncologists in 18 cities in the Carolinas, Virginia, Georgia, and Tennessee, has proved to be an invaluable resource to this end.

As the Cancer Center's goals widen, its continued success will undoubtedly depend upon individuals like Dr. Spurr who bring to the problem of cancer skill, dedication, and empathy for the sick. ❑

"... I shall be telling this with a sigh
somewhere ages and ages hence;
Two roads diverged in a wood, and I—
I took the one less traveled by,
And that has made all the difference."

—Robert Frost

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Aphorisms of the Month

Edited by Daniel Sexton, M.D.

New Therapies and Therapeutic Evangelists

It usually requires a considerable time to determine with certainty the virtues of a new method of treatment and usually still longer to ascertain its harmful effects.

—Alfred Blalock, *Principles of Surgical Care*

Some drugs have been appropriately called "wonder drugs" inasmuch as one wonders what they will do next.

—S.E. Stumpf, 1966

Therapeutic evangelists remind me of the trial scene in *Alice in Wonderland.* The King, getting inpatient,, says for the twentieth time, "Will the jury consider its verdict?" "No, no," says the Queen, "Sentence first, verdict afterwards."

—Sir George Pickering, 1989

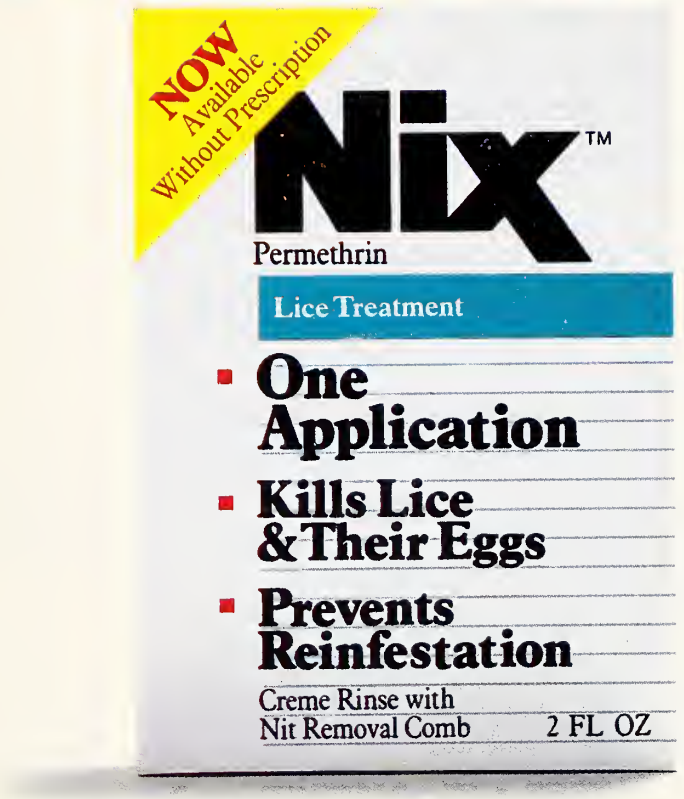
Half the modern drugs could well be thrown out the window except that the birds might eat them.

—M.H. Fischer

You should treat as many patients as possible with a new drug while it still has its power to heal.

—Armond Trosseau, 1892

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Hospital Infection Control, Seat Belts and the National Debt

Daniel J. Sexton, M.D.

The infection control (IC) program at Duke is now over 25 years old. It is impossible to prove the effectiveness of policies designed to prevent problems. It is difficult to determine which IC practices at Duke are absolutely necessary, which are optional and which are obsolete. Our recommendations to abolish old practices (e.g., surveillance cultures in nurseries), streamline others (e.g., isolation precautions in transplant patients), and institute new policies (e.g., universal precautions) have stimulated vigorous, sometimes heated debate. On the other hand, our bulging IC manual with its many IC guidelines and recommendations is met with widespread apathy and indifference by others, most of whom are busy and conscientiously preoccupied with the care of their patients. This paradox between apathy by some and dogged determination to continue old ways by others has historical and behavioral explanations.

Hospital infection control guidelines are analogous to seat belts. Both are frequently ignored without obvious detriment until an accident or outbreak occurs. People often resent being told they must comply, and propose ingenious reasons why compliance is impractical or inconvenient. The justification for both IC and seat belts is statistical. Thus many debunk and ignore theoretical arguments promoting their implementation. Loosely formulated "beliefs and feelings" are often justification to deny the validity of studies supporting their use. Laws and regulations mandating compliance are commonly met with anger, indifference or outright defiance. Doctors can be bullheaded in opposing policies of proven benefit; but, on the other hand, much nonsense has been promulgated in the name of IC.

"Hospital infection control guidelines are analogous to seat belts. Both are frequently ignored without obvious detriment until an accident or outbreak occurs."

Twenty-five years ago the Joint Commission for Accreditation of Hospitals (JCAH) mandated that without an IC program, hospitals, regardless of size, could not receive accreditation. As a result, hospital IC was born of regulatory fiat; most programs initially existed more on paper than in practice.

Trendy concepts of "Quality Control" and "Risk Management" gradually became additional justifications for the growing expense and infrastructure of IC programs. Meanwhile, most doctors and some nurses were not impressed or highly motivated by such forces. They either tepidly embraced or resented IC committees that issued memos, guidelines and rules that often changed after "oracles" at the Centers for Disease Control (CDC) held a meeting. Antagonism and antipathy developed toward regulations promulgated by officials far removed from daily hospital life and the practical concerns of doctors and their patients.

In the coming decade, regulators won't stop regulating; malpractice lawyers won't stop suing; old truths (e.g., handwashing prevents disease transmission) won't change; and nosocomial infections won't be less of a problem. We need to plan now to discard much of the useless "baggage" accumulated during the last 25 years. Discarding all useless baggage is vital, as we are certain to face new problems, rules and regulations as new risks (e.g., retroviruses and Hepatitis C) are appreciated.

Simplifying IC Protocols

Old baggage that should be discarded includes excessive isolation precautions. Many patients at Duke, such as those undergoing transplantation, are over-isolated. Most nosocomial pathogens are

From the Division of Infectious Diseases, Duke University Medical Center, Durham 27710.

transmitted by the hands of hospital personnel. Handwashing alone or gloves and hand washing are adequate to prevent transmission in most situations. Outside the operating room, masks are rarely needed. Protective shoe cover use in isolation areas and plastic disposable dishes can be relegated to the historical rubbish bin. We must isolate the problem (e.g., a draining wound), not the patient. Isolation protocols should be streamlined and "universal precautions" substituted in all but a few highly specialized circumstances. The simpler the protocol, the better.

Measures such as "terminal cleaning" of isolation rooms and special cleaning protocols after surgery on "contaminated cases" are unnecessary. Special handling of noninfectious waste such as paper and plastic from isolation areas, "double bagging" infectious waste, neutropenic precautions using masks and gowns, and most surveillance cultures are unnecessary. Their use should be abandoned. We have deleted most of the above measures from our IC guidelines at Duke but some areas of the hospital continue some of these old fashioned measures, presumably believing it is best to be over-cautions.

Surveillance of nosocomial infections without a defined purpose is an expensive waste of time. Too many hospitals have file cabinets packed with statistics that mean little. Surveillance should always have a purpose. It should be designed to locate and then elucidate endemic and epidemic problems. Unless collected data are shared and discussed with the doctors and nurses caring for patients, how can we expect them to understand the problems or be motivated to prevent them? Such feedback has become the focus of all surveillance activities at Duke.

Though some IC nonsense still exists at Duke and many other hospitals, scientifically valid data support most current IC guidelines and rules. Spread of many nosocomial infections can be prevented by sound practices. Some that work are proper care of invasive devices, sterilization and disinfection of surgical or diagnostic devices such as endoscopes, handwashing, and isolating or cohorting infected patients.

"...overuse of antimicrobials in hospitals results in localized and widespread bacterial resistance.... But this problem is like our national debt: everyone agrees there is a problem, but few have the resolve, power or charisma to reverse the momentum and institute an effective remedy."

All new medical devices should be introduced with caution and evaluated for infectious complications. Arterial lines, pressure transducers, and central vascular catheters have been widely used without a good understanding of their risks. Other devices (all expensive) introduced to prevent or reduce nosocomial infections, such as transparent polyurethane dressings over vascular catheters and urinary bag antiseptics, were proven ineffective only after widespread use. We should remember these lessons when new devices, however innocuous-appearing or theoretically safe, are introduced. At present such devices are being introduced at a dizzying pace at Duke. We expect some will cause problems and intend to study device-specific infections rates for new intravascular devices.

Preventing Infections

Approximately one in 20 patients admitted to American hospitals acquire an infection. Not all are preventable. There is undoubtedly an irreducible minimum beyond which the most stringent practices cannot lower attack rates. However, tens of thousands of patients annually acquire infections because medical personnel fail to wash their hands. Every investigation of handwashing compliance shows the same demoralizing results: doctors wash their hands in less than 50% of patient encounters, even in intensive care units.[1-3] Semmelweis was first to recognize the problem but not the last to fail to convince physicians to wash. Timely feedback of nosocomial infection rates to clinicians is the only way I know to change behavior. Such approaches lower surgical wound infection rates, presumably because an informed surgeon is a more careful surgeon before and after making an incision.[4-6]

Studies abound demonstrating that overuse of antimicrobials in hospitals results in localized and widespread bacterial resistance. In fact Kunin has advocated that this "outbreak" of inappropriate antimicrobial use be studied and managed just as any other epidemic.[7] But this problem is like our national debt: everyone agrees there is a problem, but few have the resolve, power or charisma to reverse the momentum and institute an effective remedy. Doing so steps on toes.

Looking Ahead

Just like the national debt, problems with resistant hospital flora grow worse and solutions grow more difficult. Nonetheless, this problem should be on the agenda of all IC programs in the 1990s. A solution will require imagination, local input and a mutual give and take. Overly rigid rules and regulations aren't likely to work; but most clinicians will adapt if they perceive a reason and a need. Hospital IC programs need to provide meaningful locally collected data that stimulate change. An interventional study to improve antibiotic prescribing practices among housestaff at Duke is due to begin in 1991. The likelihood of success in this endeavor is doubted by many, but most agree the study is needed.

IC programs must meet the minimum requirements of the JCAH and the Occupational Safety and Health Administration. This is the mandated "floor." The "ceiling" will depend upon the size, patient population, resources and special features of each hospital. Not every guideline of the JCAH (e.g., hospital-wide surveillance for nosocomial infection) must be followed. Not all CDC recommendations are mandates (e.g., those in "Category II and III"). Inspectors and regulators will be favorably inclined in an audit or review if a hospital has established a solid floor and can identify the priorities that outline their ceiling.

Infection control practitioners must become smarter workers as they likely can't become harder workers. A clear set of goals and priorities will help; so will throwing out unnecessary baggage. Goals become the basis for measuring progress. Small hospitals undoubtedly have priorities different from those of big hospitals.

Whatever the goals, IC rules and regulations should be kept to a minimum. Those without scientific basis should be either eliminated or simplified. Even in an era of increasingly complex technology, IC can remain simple and still be effective. The simpler the better.

With fewer unsubstantiated dogmatic rules and better exchange of ideas and data, maybe even longstanding opponents and skeptics will drop their opposition to IC policies and cheerfully wash their hands before each patient contact. And perhaps the next Congress will balance the federal budget. ❑

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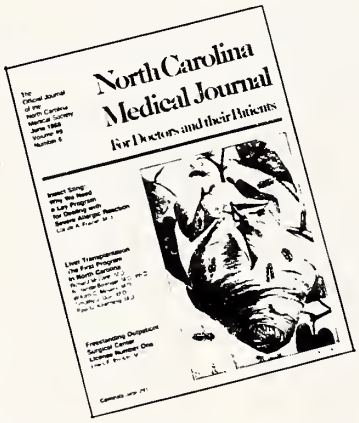
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The High Cost of Failure

Prisoners with and without HIV Infection

E.T. Chandler, M.D.

A fundamental connection between disparate events is prevalent in American society; the need to have more and larger prisons to incarcerate the increased number of designated criminals is driven by a decade of neglect of children. And a great many of the people who murder, assault, rob, and rape will use illicit drugs, increasing the incidence of Human Immunodeficiency Virus (HIV) infection in prisoners to an average 14 times that of the general population. Medical care of prisoners with HIV infection is multidimensional, driving costs of incarceration well beyond the average of $16,000 a year, not to speak of the human toll.[1] Each prisoner represents a child who failed—whether because of family, society, or self, nonetheless a failure.

In the Beginning and Then

When a baby is born to a mother who has not yet grown up herself, both mother and baby are likely to have a limited future and to place a substantial burden on society.

From the Department of Medicine, Bowman Gray School of Medicine, 300 S. Hawthorne Dr., Winston-Salem 27103.

"...high costs and the ongoing expansion of jails and prisons, however necessary, ought to alarm even the staunchest advocates of tough sentences that something else is needed."

The baby of an adolescent mother is born into peril. It is more likely than other babies to have physical problems at birth—to be born prematurely, at low birth weight, in generally fragile health, in need of expensive neonatal intensive care, and at risk of cerebral palsy, epilepsy, mental retardation, and other handicaps.

However, the risks of physical problems are only the beginning. Most damaging consequences flow from being in a poor home parented by a single mother unready for parenthood and upon whom lies the responsibility of nurturing a child toward adulthood. In this world such youngsters leave school unable to read, write and do simple arithmetic, facing bleak futures. When a substantial proportion of boys and girls leave school uneducated, the rest of us face an uncertain tomorrow.

If the normal transition to adulthood is halted before the individual has reached a reasonable degree of maturity, there is likely to be trouble. Adolescence, after all, is a time of trying out different kinds of roles, different ways of behaving. In the unpredictable swings between independence and dependence we may see egocentrism, impulsiveness, exploitive behavior, risk taking, and the need for immediate gratification. Many are at risk of picking up a gun to commit a crime for money and of pushing drugs and using drugs.

School-age childbearing, dropouts, adolescent crime. In the real world each may progress to the other, interact one with another, and cluster together in the same individual. The individuals also cluster and the damage that begins in childhood and becomes so visible in adolescence reverberates throughout a neighborhood as part of an inter-generational cycle of social devastation.[2]

Our juvenile courts are clogged with kids picked up for a myriad of infractions. Punishment is usually not an option for juveniles; rehabilitation is. But the ministrations of juvenile courts border on the farcical. There are few places to put kids who are headed for "rotten outcomes." Good foster homes are filled. The sorry ones may be as bad as the child's own. Institutions such as good orphanages are in short supply.

For some youngsters an appearance in juvenile court will awaken a sense of right and wrong and they will turn aside. Although most juvenile delinquents do not become adult criminals, virtually all adult chronic offenders were once juvenile offenders.

All too often the disadvantaged child lives in a neighborhood where there are no neighbors who demonstrate that education matters and that steady work is a viable alternative to welfare and crime, and that a stable family is normal. The vacuum is filled by drug pushers, pimps and prostitutes. They're often the only successful people the kids see.

It is no wonder, then, that kids become hooked on intravenous drugs and harmful sexual behavior and become a part of vastly exacerbated social dislocations, from robbery to personal violence, and in the process become incarcerated and perhaps infected with HIV.

At age 18 juveniles become adults, and the judge knows what to do: remand them to prison. Consequently, our jails and prisons are burdened far beyond their intended capacities.

Most medical problems in prison are similar to those in primary care. HIV infection, however, presents as a wide spectrum, each manifestation requiring a multidimensional approach, driving up the medical costs.

Seroprevalence rates in prisons vary from a fraction of a percent in Iowa, New Hampshire, Oklahoma, and North Dakota to 6.9% in Florida and 17% in New York. Overall about 2.8% of incoming federal prisoners were HIV positive in 1989.[3]

HIV in North Carolina Prisons

HIV testing is routine and mandatory in the Federal Prison System. In North Carolina testing for the virus is possible only to confirm clinical suspicions, upon inmate request, and under a few other limited circumstances. Through May 1990, 72 cases of Acquired Immune Deficiency Syndrome (AIDS) were diagnosed in North Carolina state prisons.

The General Assembly of North Carolina directed the Health Services Section of the Department of Corrections to study the seroprevalence rate of inmates admitted between November 1989 and April 1990, the data to be used for epidemiological and fiscal planning purposes.

Eight thousand seven hundred twenty-six inmates were tested. Seroprevalence was 3.1%. Fifty-seven percent of the studied population was black, 40% white, and 3% "other."

Of those who tested positive, 77% were black males, 10.5% black females, 7.6% white males and 2.1% white females.

Of the total inmates studied, 91% were male, 9% female. Of those HIV positive, 87% were male, 13% female. Forty-five percent of the HIV positive inmates were 30 to 39 years old, another 38% were 20 to 29.[4]

Mandated Care: A Plan to Meet the Consequences of an Unforeseen Epidemic

In 1976 the Supreme Court, in the *Estelle v. Gamble* case, mandated that prisoners have access to medical care. They cannot be treated with deliberate indifference to their health. AZT and Pentamidine therapy for the HIV infected inmates not only increases the workload for nurses and other medical personnel but drives up the cost as well.

A new complaint from an infected prisoner raises fear that the prisoner will become too weak to care for him or herself or will become blind or paralyzed. The greatest increased cost will be the expense of providing a sophisticated range of care, drawing from medicine, nursing, psychology, social service, health education, and religion.

To meet the needs of HIV infected inmates in a planned and orderly way, the Department of Corrections will request $7,055,794 of the General Assembly, $2,477,600 to be non-recurring, $4,578,194 to recur.

These monies will hire personnel to counsel all inmates to accept testing for the virus. Prisoners found to be positive will be counselled about risk control and psychosocial and medical services. Funds are included to provide AZT and Pentamidine therapy for infected inmates who qualify.

An AIDS coordinator and a TB coordinator will be hired to coordinate therapy and to monitor new information for advances in therapy as well as disseminate that information to the medical personnel rendering care.

A "special needs" clinic will be established with part of the money. The personnel of this clinic will arrange for and coordinate contractual care by physicians in oncology, infectious disease, oral medicine, dermatology, neurology, gastroenterology, and pulmonary medicine. They will provide transfusions, phlebotomy, antibiotics, screenings, counselling, discharge planning, and psychological and spiritual support.

Three hundred twenty-four thousand dollars will be budgeted for outside hospitalization.

Four million ninety-one thousand five hundred dollars will be used to expand Central Prison's medical facilities and to hire 52 additional staff.[5]

Other Financial Consequences of the Crime Wave

In November 1990, North Carolina voters narrowly approved $200 million in jail bonds. Add $122 million in Mecklenberg County jail bonds, $58 million in Forsyth County, the list goes on. These costs are essential to the orderly and effective operation of the criminal justice system, which is all but overwhelmed by rising crime.

Adequate prison space contributes to deterrence and, in removing criminals from society for a while, contributes to prevention of crime as well. But such high costs and the ongoing expansion of jails and prisons, however necessary, ought to alarm even the staunchest ad-

vocates of tough sentences that something else is needed.[6]

The Imperative of Prevention

Lisbeth B. Schorr, in *Within Our Reach*, suggests that as a nation we must mobilize a great new surge of talent, energy, and resources, in order to systematically extend effective service and support to vastly more disadvantaged children and families. If we do not, these children will eventually fill our new jails.[7]

First, Ms. Schorr suggests, we must extend programs that are already operating effectively nationwide, such as Head Start and the Women Infants and Children program. Enrollment must be extended to all who are or should be eligible.

Second, states and local communities must be helped to extend widely the successful programs that have heretofore operated only on a small scale. The development of concrete strategies to extend successful programs to all who need them is the challenging new frontier in human services today. Highest priority must go to efforts to combine disparate programs into coherent combinations of services in neighborhoods where persistent poverty and social dislocation are concentrated. Government agencies must review their funding policies and regulations to identify the most important impediments to providing coordinated services, and seek their removal. Government at all levels must join with foundations and other private institutions to assure local communities the skilled technical assistance and the additional funds that will be needed to provide effective services to truly disadvantaged populations.

Lastly, everyone concerned—voter and elected official, volunteer and bureaucrat, front-line worker and policy analyst—must recognize that investing in the futures of disadvantaged children means investing in first-class services.

George Miller of California, Chairman of the U.S. House Select Committee, Youth and Families, told Ms. Schorr, "What you found is what this committee found, and what we keep finding over and over again: when it comes to services for kids and families in poverty, where it is done in a first-class fashion, it succeeds beyond our wildest dreams. And everywhere we've tried to do it on the cheap, everywhere we've tired to cut a corner, we end up spending money with no appreciable results."

"All Americans are burdened by the high cost of not making the required investment. Reaching out to the hard-to-reach and helping the hard-to-help are not idle sentiment, but a practical response to an urgent American problem."

The common elements of successful programs—comprehensiveness, intensiveness, family and community orientation, and staff with time and skills to develop relationships of respect and collaboration—add up to first-class services.

Today's political and budgetary imperatives will likely make a major new commitment to improve the futures of America's most disadvantaged children seem illusory. Will the costs of first-class programs, in dollars and professional resources, preclude elected officials from meeting the needs of such a powerless constituency?

All Americans are burdened by the high cost of not making the required investment. Reaching out to the hard-to-reach and helping the hard-to-help are not idle sentiment, but a practical response to an urgent American problem.

Living in poverty, ignorance, neglect, and hopelessness not only are major contributors to a child's progression to a life of crime, but these life circumstances rob kids of exposure to fundamental Americana: values. Kids need exposure to value-forming myths that will become their moral compass: Bible parables, the tales of Honest Abe and Teddy Roosevelt, accounts of self-sacrificing abolitionists, stories of men and women whose heroism consisted not in striking it rich but in doing the right thing.

But we cannot espouse lofty ideals for our nations' citizens nor expect children to grow up avoiding rotten outcomes if the tool we use is idle talk about returning to values of a bygone era. Kids cannot return to where they've never been.[8]

Enlightened realism tells us that money for new jails and prisons must be matched by money for prevention. It is not an either-or alternative. We must have both. We must not let today's necessary expenses for prisons steal funds from children without hope. With help they will have a real chance to become contributing citizens of tomorrow, instead of criminals, and our need for even more prisons, courts, and police will then fade.

And, schools, churches, families—those institutions traditionally responsible for direct ethical instruction—must do what they can to restore the values of the good old days. And, as well, we adults must live as examples for kids to emulate. Otherwise, the days ahead will be worse than anything we can now imagine. ❑

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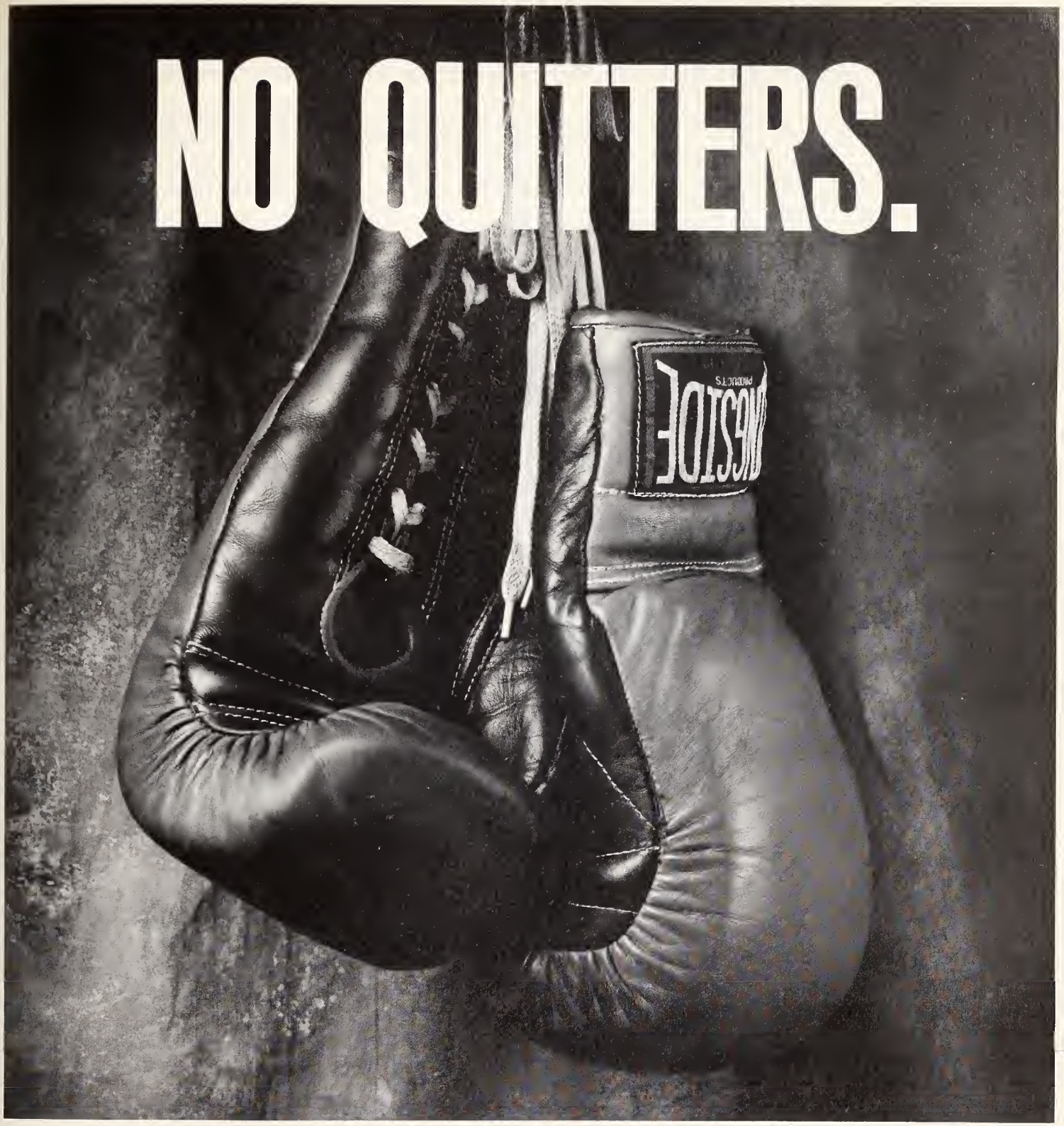
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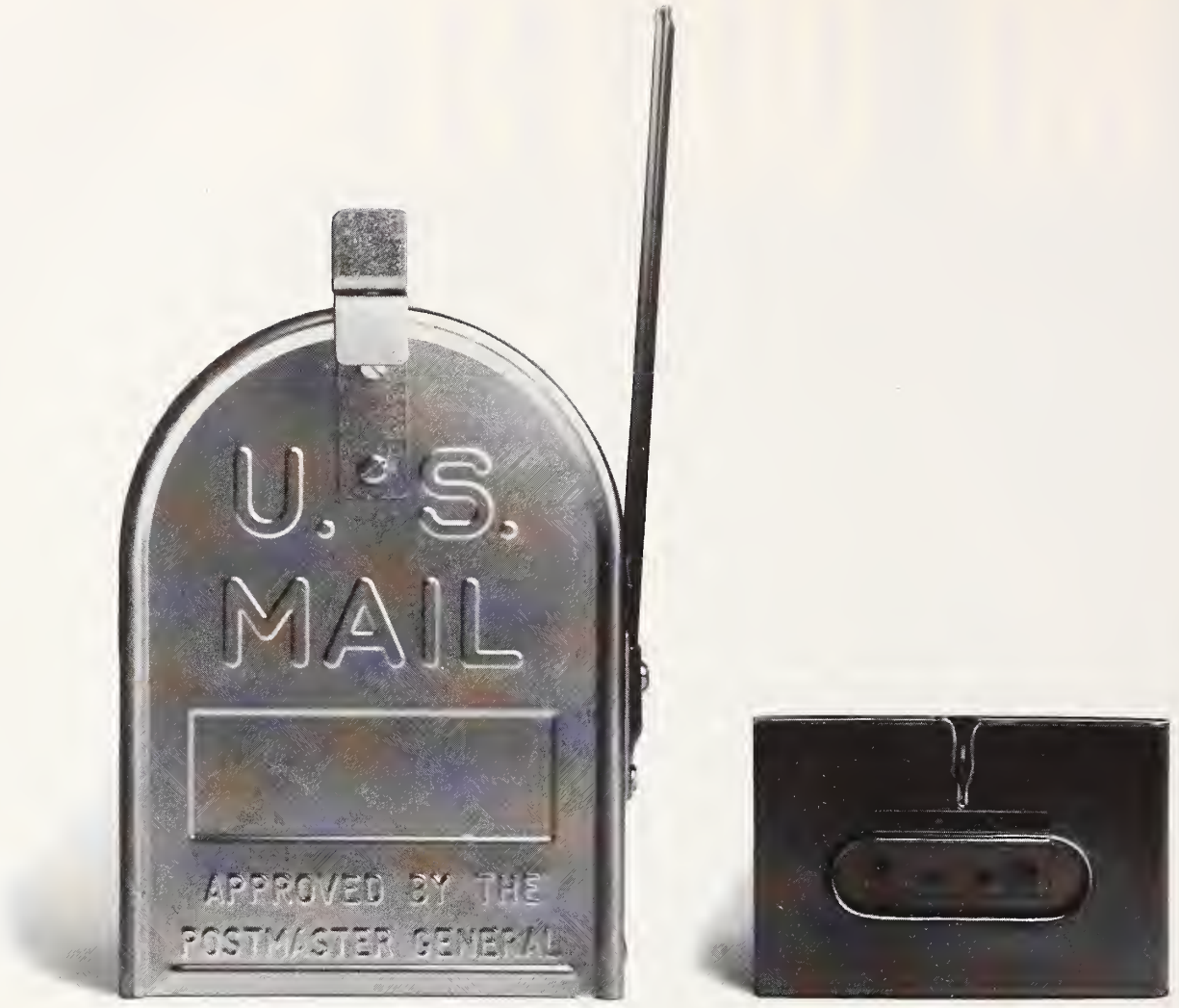
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Kikuchi's Disease

A Benign Disease of Unknown Etiology

Mark C. Thel, M.D., and Richard S. Vanderheide, M.D.

An 18-year-old woman presented in November, 1989 with the chief complaint of a right supraclavicular mass of two weeks' duration. Initially, she noted an asymptomatic swelling at the right base of her neck, "the size of a pea," that progressed in size over the ensuing weeks. It was accompanied by progressive neck stiffness and pain on rotation to the right. She had had approximately two episodes of chills and diaphoresis with fever to 103°, as well as frontal headache, decreased appetite, and lassitude.

There was no history of weight loss, rhinorrhea, sore throat, odynophagia, dysphagia, otalgia, or cough, and specifically no history of any other masses or adenopathy. Also, there was no easy bleeding or bruising, night sweats, pruritus, malaise, or exposure to patients infected with *Mycobacterium tuberculosis*.

She had a benign past medical history, was G_1P_1, with no risk factors for AIDS, and was not taking any medication.

From Duke University Medical Center, Durham 27710.

She was an afebrile, healthy appearing, mildly obese black woman with a nontender, ill-defined, easily visible right supraclavicular 3 x 2cm mass. It was not warm nor erythematous and appeared to be a group of matted lymph nodes. Her breasts were without masses, tenderness, discharge, or skin changes. She had a slight decrease in abduction of her right shoulder secondary to pain at the mass and no other demonstrable adenopathy. Laboratory studies documented a leukocyte count of 3,900/mm^3 and a hematocrit reading of 36%. Her chest radiograph was essentially normal, without adenopathy or infiltrates.

The patient was lost to followup and not seen until five months later. At that time, there was no detectable change in the mass or the remainder of the physical examination. Because of her persistent adenopathy, a wedge biopsy of the mass was performed in April, 1990.

Gross examination was unremarkable. Histologic examination revealed a patchy necrotizing process primarily localized to the paracortical regions of the lymph node. In focal areas the perinodal adipose tissue contained a mixed cellular infiltrate, but no necrosis was present. The areas of necrosis contained large amounts of eosinophilic fibrinoid debris admixed with nuclear dust and karyorrhectic debris. The cellular infiltrate consisted almost entirely of mononuclear cells, which included small lymphocytes with slight nuclear angulation, histiocytes, and reactive immunoblasts. No significant numbers of granulocytes or plasma cells were identified. Immunoperoxidase stains revealed a mixture of T lymphocytes, B lymphocytes, and macrophages with a T cell predominance. The B lymphocytes were arranged in nodules and composed of a mixture of kappa and lambda positive cells.

The histology and immunoperoxidase results were consistent with histiocytic necrotizing lymphadenitis, or Kikuchi's lymphadenitis. The specimen was sent to the National Institutes of Health for review, where the diagnosis was corroborated.

In May, 1990 the mass was unchanged in greatest diameter, but the depth and elevation were markedly reduced.

Discussion

Necrotizing lymphadenitis without granulocytic infiltration, Kikuchi's disease, was originally described in Japan in 1972.[1] As of August, 1985, only 27 cases had been reported outside of Japan.[2] With increasing awareness, the rate of recognition has slowly increased over the last five years.

Kikuchi's disease is characteristically found in young women who present with focal cervical adenopathy, as a single

node or a group of nodes.[3] Dorfman et al. reviewed 108 patients, finding that 83 of the 108 individuals had localized lymphadenopathy, usually cervical and frequently the posterior cervical chain alone.[4] The most common associated symptoms in their review were fever, chills, weight loss, and sweats. The mean duration of symptoms approximated three months.[4]

The pathogenesis of the disease has not yet been firmly established. Associations have been made with SLE and with Epstein-Barr virus, toxoplasmosis, cytomegalovirus, and *Yersinia enterocolitica*.[4,5] All reported cases have been self-limited without notable sequelae.

This example of a benign disease emphasizes the importance of clear communication between the clinician and pathologist. In a 1983 review of 30 cases of Kikuchi's disease, 40% were originally diagnosed as malignancies. Thirty percent of the patients underwent further invasive diagnostic evaluation.[6] The patient discussed here did not receive needless diagnostic procedures and potentially toxic medication, and she is doing quite well today. ❑

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Health Watch

VOLUME 52 / NUMBER 6 / JUNE 1991

Infant Mortality

HELPING OUR BABIES

Infant mortality (babies dying before their first birthday) is one of the strongest indicators of the health of a population—particularly its mothers and babies. So, how healthy are we here in North Carolina? Well, in 1988 we had the dubious distinction of leading the nation in infant mortality. For every thousand babies born that year, 12.7 died. Since then the rate has dropped to 11 deaths per 1,000 live births (1990 figures) putting us in a tie with Missouri for 46th place, just slightly ahead of South Carolina, Alabama and Georgia.

Reasons for infant deaths

Two-thirds of all babies who die in the first year of life are born too soon, too small—before the 37th week of pregnancy or under 5 1/2 pounds; prematurity is the #1 cause of infant death. Babies also die from SIDS (Sudden Infant Death Syndrome), birth defects, infections and injuries. Infant mortality is not confined to only poor families or rural areas. Babies from urban areas and from wealthy families are susceptible as well.

North Carolina Medical Society, PO Box 27167, Raleigh, NC 27611.

Why are newborns under such stress in our state? The answer lies in a complex mix of social and medical factors such as poverty, inadequate prenatal care, drug and alcohol abuse, poor nutrition and ignorance.

To address this serious problem, North Carolina has implemented numerous state and local programs to improve access to health care, to educate women about pregnancy and to give pregnant women the social and medical services they need. Through the expansion of the state's Medicaid program, proposed expansion of the WIC program (women, infants and children) and other initiatives, things are improving for our babies.



Prenatal Care

The most important step for a healthy pregnancy and a healthy baby is to get prenatal care as early as you can. Visit your doctor or clinic as soon as you think you are pregnant, and schedule visits on a regular basis.

Early and regular prenatal care is important for your health and that of your baby. During prenatal visits to the

doctor you will be checked to see that your pregnancy is developing normally. If you develop a problem or have a risky condition, such as high blood pressure or diabetes, prenatal care may keep it from becoming serious.

Prenatal care includes:

- Blood, urine and other tests
- Ongoing medical care such as blood pressure and weight checks, measurement of your uterine (womb) growth, checks of the baby's heart beat and pelvic exams as needed
- Education on pregnancy, labor, delivery, baby care, parenting and family planning
- Answers to your questions
- Information about other services you may need
- Nutritional assessment and counseling

You have a part in your prenatal care. You should:

- Keep your appointments and continue your care
- Attend prenatal classes if possible
- Write down your questions to ask the doctor or nurse
- Tell the doctor or nurse anything you think is important for you and your baby's health
- Avoid drinking alcohol, smoking, taking drugs or other harmful agents
- Know the warning signs in pregnancy and tell your doctor or nurse at once
- Follow the advice of your doctor, nurse, nutritionist or other care giver

Staying Healthy

Pregnancy is a very special time to take care of yourself and your baby. Common sense tells us that healthy mothers are more likely to have healthy babies, and good nutrition contributes to good health. What you eat nourishes your baby as well. Cutting down on your use of salt and caffeine is a wise idea, as is drinking plenty of fluid and balancing your diet with servings from each of the four basic food groups: milk and dairy products, fruits and vegetables, grains and proteins (such as meats, fish and poultry). Food gives babies the nutrients (body building blocks) they need to build their bodies. Remember, when you are pregnant, your baby eats what you eat. If you eat foods that supply the nutrients the baby needs, that improves the baby's chances of being born healthy.

Exercise during pregnancy helps tone and strengthen muscles, improve your and your baby's oxygen supply and can help you feel good both physically and mentally. Overall conditioning, such as swimming, bicycling or walking, is especially beneficial. Aerobics and exercises that increase your pulse rate help condition your body and strengthen your heart, too.

Women at risk

Women at highest risk of having an infant death or a low birth weight baby are those who:

- receive little or no prenatal care
- are in their teens
- are over 40
- use drugs such as crack/cocaine during pregnancy
- drink beer, wine or liquor
- smoke cigarettes
- have poor eating habits
- have certain medical conditions in their families
- get pregnant less than 1 year following their last delivery
- are under stress

Things to Avoid

Alcohol

While you are pregnant, do not drink wine, beer or liquor. Some babies born to mothers who drink heavily have a condition called the fetal alcohol syndrome. It is not known at what point in pregnancy or how much alcohol causes the



syndrome, but its consequences are serious and sometimes lifelong. It is best not to drink at all during pregnancy. If you have questions or drink regularly, talk to your doctor.

Smoking

Smoking may cause cancer, heart and lung disease. If you smoke, the health of you and your baby is at risk. The baby of a smoking mother tends to be smaller at birth and may be at risk of being born too early (preterm). If you smoke a lot, your baby is at more risk. Now is a good time to quit smoking.

Drugs and medicine

Avoid taking any medicine or drug during your pregnancy, unless your doctor or nurse-midwife orders it for you. This includes aspirin, antacids and cold medicines. Some medicines may cause birth defects or endanger your baby's health. If you take any medicine regularly, make sure the doctor or nurse giving you prenatal care knows about it.

Caffeine

Caffeine is a stimulant found in coffee, tea, chocolate and many soft drinks. It may cause you to stay awake. It may also speed up your heartbeat and breathing, as well as give you "the jitters." Caffeine may cause health problems for your baby. During your pregnancy, it is best not to drink more than 2 cups of coffee, tea, cocoa or soft drinks a day.

Cat litter, soil, and uncooked meats

These substances may be the source of a disease called toxoplasmosis, which could be passed to your unborn baby and may cause mental retardation, brain damage and blindness. It is best not to change cat litter at all during your pregnancy or to eat rare or uncooked meat. Wear gloves if you must change cat litter, work outside with soil or work with uncooked meats. Be sure to wash your hands well afterwards.

X-rays

During pregnancy, x-rays may affect your baby's growth, cause birth defects or cause other serious diseases. If an x-ray is ordered for you, make sure the doctor, dentist or hospital staff knows that you are pregnant before the x-ray is taken.

Chemical and work hazards

Some chemicals have been found to cause birth defects, miscarriage and preterm labor. Chemicals including lead, mercury and those found in insect sprays and in work places which make rubber, plastics and textiles may be harmful. Find out what chemicals or other substances are used in or around your job. Pregnant women should not come in contact with certain substances. Read the directions and warnings on bottles of cleaning fluids, paints and chemicals used at home. Sometimes the pregnant woman may need to wear gloves or a face mask to protect herself and her baby.

Working conditions that call for long hours of standing, heavy lifting or exposure to heat and cold may also cause problems during your pregnancy. Discuss these and other working conditions with your doctor.

Danger Signs in Pregnancy

You should know and report at once if you experience any of the warning signs in pregnancy. Call your doctor or go to the emergency room right away if any of the following happen.

- Bright red vaginal bleeding
- Leaking of the bag of water (sudden gush or slow leak)
- Sharp pains in abdomen or side that do not go away
- Sudden onset of severe swelling
- Severe headaches and changes in your vision
- Chills and fever
- Pain when you pass urine
- Seizures

Prevention: The Cost-Effective Answer

For every dollar spent on prenatal care, $3.38 is saved in medical care costs in the first year of a baby's life. These savings are most striking when we look at the cost of caring for premature babies.

- The cost of neonatal intensive care to save the life of one low birth weight infant ranges from $30,000 to several hundred thousand dollars.
- The cost of intensive neonatal care for five low birth weight babies could pay for prenatal care for 149 women.
- Premature infants are at a high risk for conditions such as mental retardation, cerebral palsy and blindness. A child with one of these can cost an average of $22,590 per year more than a normal child.
- The 1,227 infant deaths in North Carolina in 1988 represent a loss of lifetime earnings estimated to be between $312 and $579 million.

The greatest cost cannot be measured in dollars. This is the emotional pain that far too may families must bear.

Need Help?

If you need help—medical, financial, or emotional—call your local health department or clinic for more information on the following programs, or call (800) FOR BABY.

Baby Love

If you're pregnant or have a child under six, you may qualify for the Baby Love Medical Assistance Program. This North Carolina program can help you and your baby from the

beginning. Assistance includes payment for your medical checkups, help with transportation, hospital care for your baby's delivery, health care for you and your baby after your baby's birth and health care for your other children under age six. Even if you've never been eligible for medical assistance before, you may qualify for the Baby Love Medical Assistance Program. Look into it.

WIC

This is a supplemental food and nutrition education program which can help you and your baby. With WIC, you can learn what foods are best for you and for your baby, receive information and support for breast-feeding, and also receive foods to help you have a healthier diet. You may qualify for WIC if you are a North Carolina resident who is pregnant, breast-feeding or within six months after your baby's birth, or if you have an infant or child under five.

A New Beginning

Like birth itself, pregnancy is a new beginning. The healthy lifestyle you develop during pregnancy—learning about your body, eating well, exercising and keeping fit—can last a lifetime and help you all become the happy, healthy family you deserve to be.

Much of the information in this article was based on materials developed by the State of North Carolina, the Governor's Commission on Reduction of Infant Mortality, the Healthy Start Foundation and the March of Dimes. For copies of these materials you can call (800) FOR BABY, Monday through Friday between the hours of 9:00am to 7:00pm.❑

1991

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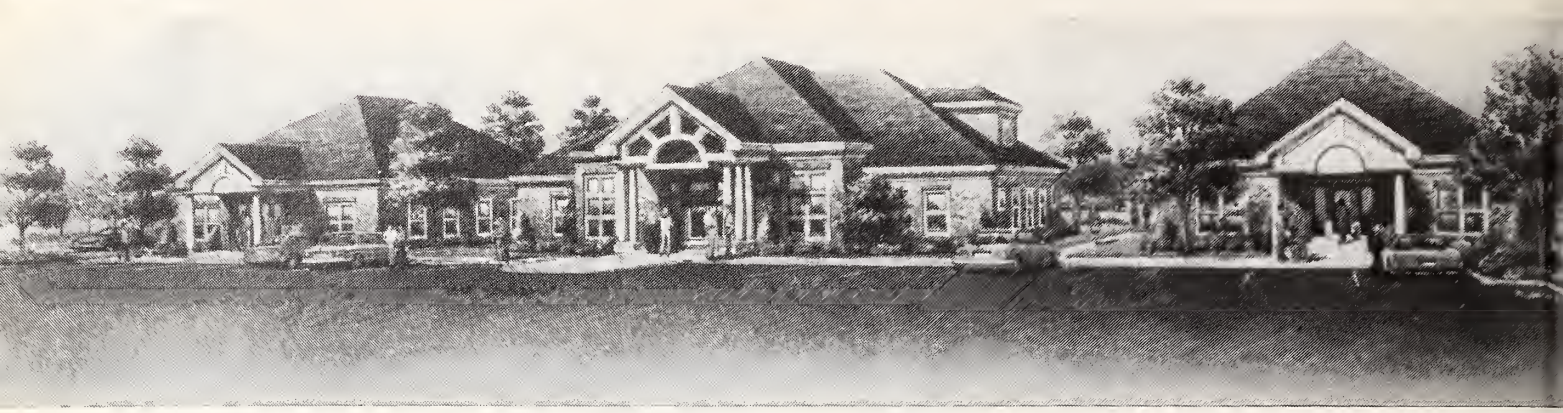
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Historical Note: North Carolina's First Hospital

Marvin P. Rozear, M.D.

Although hospitals were well known in Ancient Greece and Renaissance Europe, they were a relatively late development in the burgeoning British Colonies, where the first was Pennsylvania Hospital, in Philadelphia, founded in 1755. Similar institutions followed—New York Hospital (1775) and Massachusetts General Hospital (1821)—but hospitals were virtually unheard of in the South before the Civil War. Patients were treated in homes, barracks, monasteries, or whatever shelter suited the occasion ("derived hospitals"). Physicians converted large residential dwellings to "proprietary hospitals," a practice that persisted and evolved into the twentieth century. However, the phenomenon of a building planned, constructed and used as a hospital ("designed hospital") did not exist in North Carolina until the fifth decade of the nineteenth century.

One would guess that North Carolina's first hospital might have been built in a large metropolis, such as Raleigh or Charlotte. In fact, Dorothea Dix opened its doors to patients in Raleigh in 1856. Charlotte Memorial Hospital first transferred patients from a building originally used as a military academy in 1878. Surprisingly, the first designed hospital in North Carolina was built in 1846-1847 in what is now a ghost town: Portsmouth, on Portsmouth Island. In its hey day, the 1850s, a population of almost 700 and an active commerce flourished there. Thereafter the population declined. In 1958, Portsmouth claimed only three residents, and by 1972 there were none. Now two dozen empty buildings stare out at Pamlico Sound and Ocracoke Inlet, maintained by the National Park Service. They seem to be waiting for someone to come home. All that remains of the hospital is a brick cistern and a fragmented fireplace foundation. It is instructive to visit this bleak island and reflect on humble beginnings (and endings). Inaccessible now except by privately owned boat or aircraft, Portsmouth possesses all the eerie beauty one could wish for in a ghost town: roads which are dark tunnels through sighing cedars, and crumbling cemeteries with scary old-fashioned markers, leaning wearily in the sandy loam, and silence.

Portsmouth was contrived by the Colonial Government in 1753 to fill a crucial need in North Carolina: facilitation of the practice of "lightering." Bound as the state is by the Outer Banks, which are cut by treacherous, changing inlets, maritime shipping had from the beginning avoided North Carolina's harbors for Charleston and cushier Chesapeake ports. Ocean going ships drew too much water to manage the systems of bars, swashes, shoals and sounds. Ships fit for commerce within the sounds were too small for trans-oceanic work. The best solution at the time was to "lighter" (lighten) large ships arriving from Europe, New England and the West Indies near the inlets, transferring portions of the cargoes to smaller ships, "coasters" which could then distribute them to interior towns. Thus lightened and therefore drawing less water, the larger ships could enter the inlets to lie at anchor in the relative protection of the islands, take on provisions, give crews shore leave, etc. This business, cumbersome, labor-intensive and dangerous as it was, actually worked; reliable observers of the early 1800s described seeing as many as "30 to 60 sail of ship" in the roadsteads around Portsmouth at one time. Lightering required locals to pilot the ships in and out, hands to assist with cargo transfer, wharves, warehouses and other storage facilities, and all the ancillary furniture of a busy port town—which soon appeared at Portsmouth, adjacent to Ocracoke Inlet and Ocracoke Island (figure 1).

The lightering and coasting trade brought another element to this busy, lucrative scene; sick seamen. They came from abroad, as well as the interior towns, with scurvy, smallpox, dysentery, fractures, infected wounds, venereal disease, insanity, yellow fever, ague, and miasmas (they rarely lived long enough to have strokes, heart attacks and cancer). Not being fit for duty (many posed potential quarantine problems for their ships at the next port of call), they were "dumped" on the island, more or less to fend for themselves. Generally poor, filthy and graceless, they made a sorry sight, and

From the Division of Neurology, Department of Medicine, Duke University Medical Center, Durham 27710



Figure 1. Portion of 1775 Mouzon Map showing Ocracoke Inlet and adjacent Islands. Geographical features are similar today except for Hatteras Inlet (opened by a storm in 1846), located just to the left of the "H" in the designation "Hatteras Bank." Portsmouth is shown as a sizeable town with a collection of buildings and a road stretching several miles down Core Banks in this map, drawn only 20 years after the town was begun.

were a major problem for the islanders. Care, such as it was for these wretches, was provided in homes, haphazardly. There was no physician within forty miles of Portsmouth until 1828.

The Marine Hospital Service

Congress, following a British practice, established a system of providing "Relief for Sick and Disabled Seamen" by an act of July 16, 1798, signed into law by President John Adams. This was, in reality, a compulsory, payroll-deduction, health insurance scheme. Under this plan, $.20 was deducted by the ships' masters from the monthly pay of each seaman ("hospital money"), and paid to the Collector of Customs at each port of entry. The collector, in turn, disbursed the funds, procuring for sick and disabled seamen, "relief," in the form of medical care, nursing, medicines, lodging and board, such as it might be available locally. Ocracoke was made a port of entry in 1806. James Taylor was appointed the first collector. The collectors at Ocracoke, many of whom resided at Portsmouth, managed the medical care of seamen in these two towns.

As one might imagine, this system was not a great improvement on the old—with two exceptions: first, the locals who assisted beneficiaries of the fund were rewarded for their trouble. Second, in 1828 collector Joshua Taylor was able to attract a physician to Portsmouth, Dr. John W. Potts, who signed a contract to be hospital physician for an annual salary of $1,500. At this time the island's population was about 300. The pickings being lean, Dr. Potts quickly saw that maintaining a hospital at this remote location, even with a private practice on the side, was a grim proposition. He subcontracted with Dr. Samuel Dudley the next

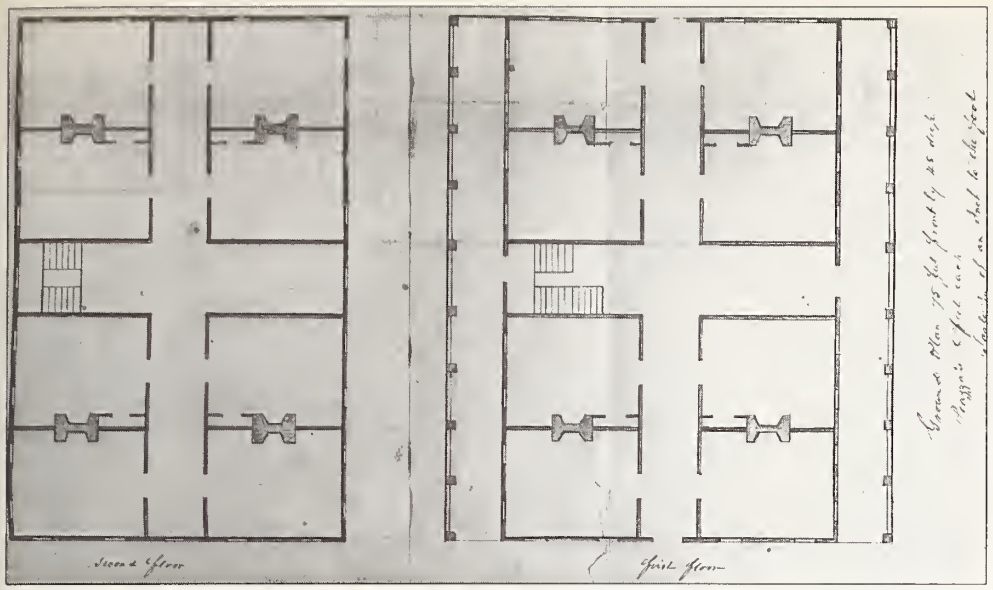


Figure 2. One of the plans submitted to the Department of Treasury for the United States Marine Hospital at Portsmouth, completed in 1847. Note fireplaces in each room.

year. There followed a series of physicians working out of a small, rented two-room dwelling in the most primitive circumstances imaginable. With high tides and storms, sea water flowed over the floors of the "hospital." Drinking water, described as "brackish and bitter," was obtained from a shallow hole dug in the sand. Everyone could see this was an intolerable situation. The lightering business kept building, and the sick and disabled seamen kept coming.

ing and provisioning delayed opening of the hospital until 1847. This was a very substantial two story structure, built on piers, with a fireplace in each room, primitive running water, spacious "piazzas" (porches), and separate quarters for the hospital physician, and at times, a "medical student." Two plans submitted during the bidding for this structure were recently found in the letters from the Collectors of Customs to the Secretary of the Treasury at the National Archives (figures 2 and 3).

The hospital had a brief existence—as a hospital. The practice of lightering peaked about the time the hospital doors opened. With the arrival of rail service and other improvements at more traditional deep-water ports such as Wilmington and Beaufort, the lightering business at Ocracoke Inlet began to fall off, never to recover. During the 1850s a varied, but steadily dwindling, patient population sought relief at the United States Marine Hospital at Portsmouth. At times during the last half of the decade, the beds were empty. The expense of maintaining such a facility at this remote and meteorologically hostile site became apparent to Congress, and plans were started to construct North Carolina's "main" marine hospital at Wilmington. The Civil War put an end to both endeavors.

During the Civil War, Confederate forces occupied the Outer Banks, but were easily dislodged by Federals in August, 1861. Most Portsmouth Island residents fled to interior towns; less than half returned after the war. Except for fishing, subsistence farming and active involvement with the Lifesaving Service and Coast Guard, the economy continued to dwindle. The hospital building, never used as a hospital after the war and abandoned by the Federal Government by 1872, was put to a variety of uses—among them, dance hall, weather station, and telegraph station. It burned in 1894.

The Hospital At Portsmouth

Aware that marine hospitals had been built at Norfolk, Boston, Charleston, and Mobile, the collectors and other prominent citizens barraged a succession of Secretaries of the Treasury and other officials for a real hospital at Portsmouth. Enthusiastic supporters envisaged a facility which could be a referral center. At one point the collector complained that he had 17 seriously ill seamen whom he had to put up in a rough boathouse. Finally, an 1842 act of Congress appropriated $8,500 to build a hospital. A lengthy process of legal contortions over title to the land, planning, bidding, contracting, inspect-

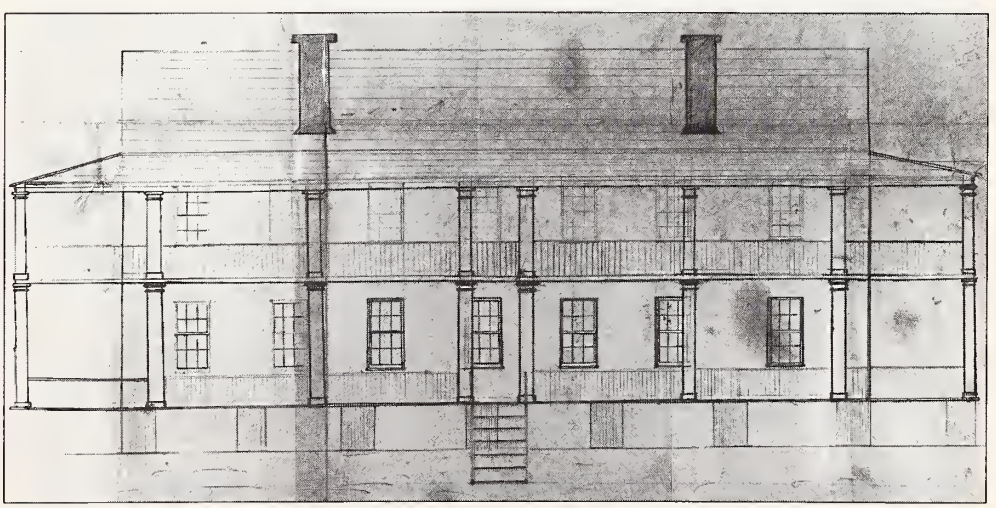


Figure 3. Side elevation of plan in figure 2. Note the substantial piers supporting the structure, which protected the lower floor from sea water (a frequent visitor to buildings on the island during storms) as well as the columned "piazzas" (porches).

All that is left of the hospital is the cistern. Following a practice which is still used by many Outer Banks residents, rainwater was collected from the roofs by gutters, and carried through downspouts to large tanks for storage. The hospital's original wooden cistern, quickly showed an annoying tendency to leak, and by about 1852, had rotted irreversibly. After the usual series of pleas, bids, contracts, deals, and inspections, a fine brick/masonry cistern was built in 1853, for $150. This structure, about 9 ft. in diameter, stands a few yards southwest of the Lifesaving Station. Presently impounding a few gallons of green slime and countless million mosquito larvae, it once contained "the sweetest water" on the island. Nearby, in the sand, are fragments of brick work, probably one of the hospital's fireplace footings (figures 4 and 5).



Figure 4. Brick/masonry cistern built for the hospital in 1853, at a cost of $150. Note in the foreground the fragment of brickwork, probably remnants of a fireplace footing from the hospital.



Figure 5. Interior view of the hospital cistern, approximately 9 ft. in diameter, which once contained "the sweetest water" on Portsmouth Island.

The United States Marine Hospital Service continued to grow. It was extensively reorganized in 1870, became the United States Public Health and Marine Hospital Service in 1902, and the United States Public Health Service in 1912. With the addition of the National Institutes of Health, the U.S.P.H.S. grew to the multi-billion dollar agency we know today. The crumbling remains of one of the first U.S. Marine Hospitals and of North Carolina's first hospital stand in mysteriously beautiful Portsmouth Village, silent witnesses to the humble origins of great health care systems of the state and nation. ❑



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Polio Epidemic

Edward P. Benbow, Jr., M.D.

In the summer of 1947, Greensboro's six pediatricians were aware of an increase in the incidence of poliomyelitis. As a group, they began to learn how to deal with patients and families involved with that crippling and sometimes fatal disease. They began to hold group rounds among the patients, to hold group discussions and lectures by invited speakers in search of methods of early diagnosis, clarification and classification of the variety of forms of polio and proper methods of treatment for each.

The number of cases of polio increased through the summer and fall, and after consultation with the National Foundation for Infantile Paralysis, it was decided that, in order to receive the best care, all patients with polio should be moved from Greensboro's five hospitals to one central area. Accordingly, in early spring of 1948 some 14 patients were placed in a large, one-floor wooden building on the edge of Greensboro that had served as a gymnasium for the Overseas Replacement Depot during World War II.

To this center the National Foundation helped recruit nurses already trained in the care of polio patients, as well as physical therapists capable of evaluation of muscle tightness, weakness and paralysis who would help plan rehabilitation for convalescent patients. It was they, the nurses and therapists, who taught the staff of the polio hospital how to evaluate a new patient on admission and who, either hour by hour or day by day, kept the staff informed of the status of each patient.



Placing the patient in the "iron lung" commonly caused much fear and apprehension, and required constant attention by nurses and physicians.

By late spring the number of patients with polio had increased, not only in Guilford County but throughout the state and the whole country. The disease was epidemic. The census of patients grew rapidly to 70, 90, and 100 in the Greensboro Polio Hospital.

An "on call" list of attending pediatricians was accomplished, and although patients could be, and some were, referred by phone directly to one of the staff, most from outside Greensboro were referred or sent to the "Polio Hospital in Greensboro," and were seen and admitted by the "call" physician.

At all times day and night one or two fire trucks with full crews of firemen stood by, because a fire in that wooden hospital—filled with crippled patients—would have been a disaster. When power

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failures occurred, firemen supervised emergency lighting and were of considerable help in hand-pumping the tank respirators until power was restored. Many times doctors, nurses, the whole hospital staff including janitors and kitchen help took turns in this manner.

All patients had routine blood work and urinalysis within 12 hours of admission. Lumbar punctures, spinal fluid cell counts and differentials, and Pandy tests and bacterial cultures were completed by the admitting physician after history taking and physical examination, including neurological examination. It was now and then a real pleasure to detect the early stages of parotid gland swelling indicating mumps meningitis rather than polio. At one time an enlarged tick was removed from the scalp of a young male with complete or partial paralysis of all four extremities—tick paralysis. On another occasion a small wood tick was removed from the parietal scalp area—and though the fever, vomiting, tight neck and hamstrings, as well as the cerebrospinal fluid, would without a history of tick bite indicate the possibility of polio, careful exam of the hands, feet, palms and soles revealed unmistakable Rocky Mountain Spotted Fever. All three of these patients were returned home or referred elsewhere for treatment and recovered completely.

Those admitted to the hospital with a diagnosis of acute poliomyelitis were placed in the "acute care" area. They were checked several times each day for muscular weakness or overt paralysis or reflex changes or swallowing difficulties. Weak or paralyzed limbs were given support and protection with pillows, blanket rolls, sand bags and foot boards.

If at the time of admission there was evidence of respiratory muscle or diaphragm weakness, those patients were watched carefully for cyanosis or efforts made by the patient to use the accessory muscles of respiration in the shoulders and neck. If the patient could not maintain adequate respiratory exchange, use of the tank respirator or "iron lung" was considered and brought into play after discussion among staff members and nurses trained in its use.

The "Iron Lung"

The tank lung was a heavy, metal tube about six feet long and about two and a half feet in diameter. At the "foot" was a heavy leather "bellows" which was firmly attached to the entire circumference of the tube. An electric motor beneath the respirator was attached to a metal arm or bar which extended vertically across the bellows and attached to the center of the bellows. So, mechanically the arm was moved out and away from the tank's foot, moving the bellows with it, then back toward the tank.

The patients in need of respiratory assistance were placed on a special stretcher built for the respirator and put inside the tank. The "head" end of the tank was fitted with a semi-rigid closure which had a flexible collar that fitted closely about the patient's neck—allowing the head to remain outside the respirator. When the motor driven bellows was pulled away from the enclosed chamber, a negative pressure was effected inside the tank, thus facilitating inspiration for the patient. The mechanical cycle then moved the arm and bellows back to the tank and for several inches into the chamber area, building a positive pressure inside, thus aiding expiration. Adjustments for varied degrees of positive and negative pressures in the tank could be made as necessary and the speed of pressure changes could be varied.

Placing the patient in the "iron lung" commonly caused much fear and apprehension, and required constant attention by nurses and physicians who with consoling words attempted to teach patients how to allow the respirator to breathe for them instead of expending their own limited efforts to breathe between pressure changes in the tank.

Blood gas determinations were not at that time available, so it was a matter of watching the color of the patient's nailbeds through glass windows in the tank walls—and observing the color of the patient's lips and face when consideration was given to need for oxygen administration by face mask or nasal tube. The flow of oxygen was determined by the observable response of the patient.

By July and August the census was in the eighties with daily admissions of from one to five patients. The hospital was so crowded that it became necessary to transfer convalescent but stable and non-infectious patients to an area on the second floor of a former newspaper building in downtown Greensboro where they continued to receive physical therapy, including the then renowned "Sister Kenny Treatment," which consisted of frequent hot wet packs to help relieve muscle tightness and discomfort.

"The hospital was so crowded that it became necessary to transfer convalescent but stable and non-infectious patients to an area on the second floor of a former newspaper building..."

Some of the acute care patients were admitted not only with spinal cord involvement which affected the muscles of the extremities and trunk, but also with the brain stem or "bulbar" involvement of the cranial nerves, which often produced paralysis of the diaphragm and palate and diminished or destroyed the patinet's ability to swallow fluids or their own salivary secretions. It became evident that those patients in need of respiratory assistance with the tank lung, and with bulbar paralysis, required what was then termed a "prophylactic" tracheostomy so that the staff could aspirate mucous and fluid. Technically it was practically impossible to perform the needed surgery with the patient inside the mechanical respirator. Intravenous fluids

"Laborers, electricians, carpenters, brick masons, plumbers, and painters all contributed their work, time, and efforts both night and day in building a 132-bed 'miracle' hospital 'from canefield to completion in 90 days.' ...on that opening day every bed was taken by acute or convalescent patients."

were necessary for these patients, sometimes for several weeks.

In the late summer of that first year, the acute care census stood at between 80 and 90 patients, at times with 12 to 15 in respirators. There was a real need for more space, more doctors, nurses, physical therapists, and more adequate facilities for rehabilitation programs.

In July three more pediatricians arrived in Greensboro. This brought the pediatric staff to nine, and it was the pediatric staff who attended all patients 18 years of age or younger. Above age 18, patients were attended by three or four internists. Each doctor made rounds usually in the early morning, checking his own patients as well as those of colleagues when asked to do so. An update with nurses and physical therapists was a very important part of "rounds." The doctor then visited the rest of the hospitals, and somewhere along the route he advised his office staff of his ETA at the office—which frequently involved delays or cancellation of appointments.

In August, land was obtained from Guilford County for a new hospital. An architect contributed his services and plans were drawn for the Central Carolina Convalescent Hospital.

Construction materials were donated or bought with contributions from the people of Greensboro and Guilford County and several surrounding counties. Laborers, electricians, carpenters, brick masons, plumbers, and painters all contributed their work, time, and efforts both night and day in building a 132-bed "miracle" hospital "from canefield to completion in 90 days." In October, just six months after the first patients were moved into the old Depot gymnasium, the hospital opened; and on that opening day every bed was taken by acute or convalescent patients.

One staff member stated that during the epidemic in 1948, 500 patients were admitted to the polio hospital.

A diminishing incidence of acute polio that winter and during the next few years was a real blessing. In 1955, eight years into the epidemic, Dr. Salk's vaccine was given to fifth grade children in Guilford County as the first "field trial" for the vaccine in North Carolina—another blessing and truly a miracle! ❑

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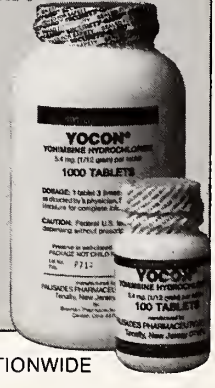
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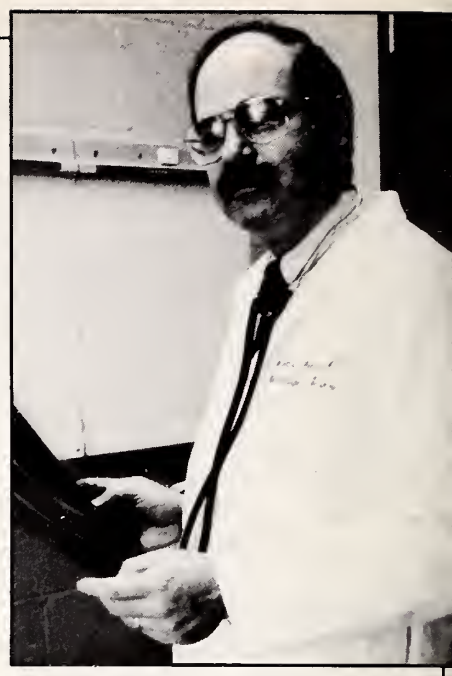
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Lightning Fatalities in North Carolina 1972-1988

Ricky Lee Langley, M.D., Kathleen Anne Dunn, M.D., James Douglas Esinhart, Ph.D.

Lightning is an infrequent form of trauma, yet it is one of the leading causes of death from environmental injury.[1] An average of 255 injuries and 96 deaths occur yearly in the U.S. from lightning strikes.[2] The reported case-fatality rate is approximately 27%; the actual case-fatality rate might be higher if reporting were more consistent and accurate.[3] North Carolina is second in the nation in the reported number of lightning fatalities, trailing only Florida.[2] Nationwide, most deaths occur between noon and 6:00 p.m. during the months of June through September.[4,5]

The potential exposure to lightning is high. An estimated 100 lightning bolts strike the earth each second and 50,000 thunderstorms occur each day.[6,7] It is estimated that lightning damages 30,000 homes and other buildings in the U.S. each year.[7] In North Carolina, cities usually record thunderstorms on over 40 days each year with the most active months being June and July.[8] In the U.S., thunderstorms are most frequent in the South and five times more common in the East than the West.[9] Lightning injuries also occur more frequently in rural areas than urban areas.[1]

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Lightning victims may be injured by one of four mechanisms. They may be directly hit by a lightning bolt; they may suffer from a side flash or splash; they may be injured from ground current; or they may be injured by blunt force due to the explosion/implosion effect of lightning as it passes through the air.[4,10] A side flash or splash occurs when the current jumps from its primary conductor, such as a tree, to the victim. Ground current may pass up through a person's body when lightning hits the ground close to a victim. A single lightning strike may injure several individuals simultaneously.[6,11]

This study was undertaken to identify all deaths due to lightning injuries in North Carolina from 1972 to 1988 and to describe those killed and the circumstances of their deaths. We discuss simple preventive measures for avoiding lightning strikes and the risk of related injuries.

Methodology

North Carolina law requires that unattended, suspicious or violent deaths be investigated and certified through the state medical examiner system. Since 1972, all 100 counties in the state have been working with the chief medical examiner's office to conduct examinations to determine the circumstances surrounding the deaths. Thus, this is an excellent source of mortality data for North Carolina.[12]

We requested a computer printout of accidental lightning deaths from the North Carolina Department of Human Resources, and obtained permission from the Chief Medical Examiner to review these files.

We extracted information from the Report of the Investigation by the Medical Examiner (RIME) and the Medical Examiner Certificate of Death. Based on narrative reports, we identified 12 categories of "location/activity at time of injury": recreational field/camping; beach/fishing/boating; garage/shelter/barn; under tree; clothesline; telephone; farm/garden; golf course; yard; in or under house; other; unknown (table 1). If a person was standing under a tree on a golf course, the activity is listed as golf course. If the individual was removing clothes from a line that was attached to a tree, the activity is listed as clothesline. If the data were conflicting or inadequate to make a determination, the activity is listed as unknown.

Results

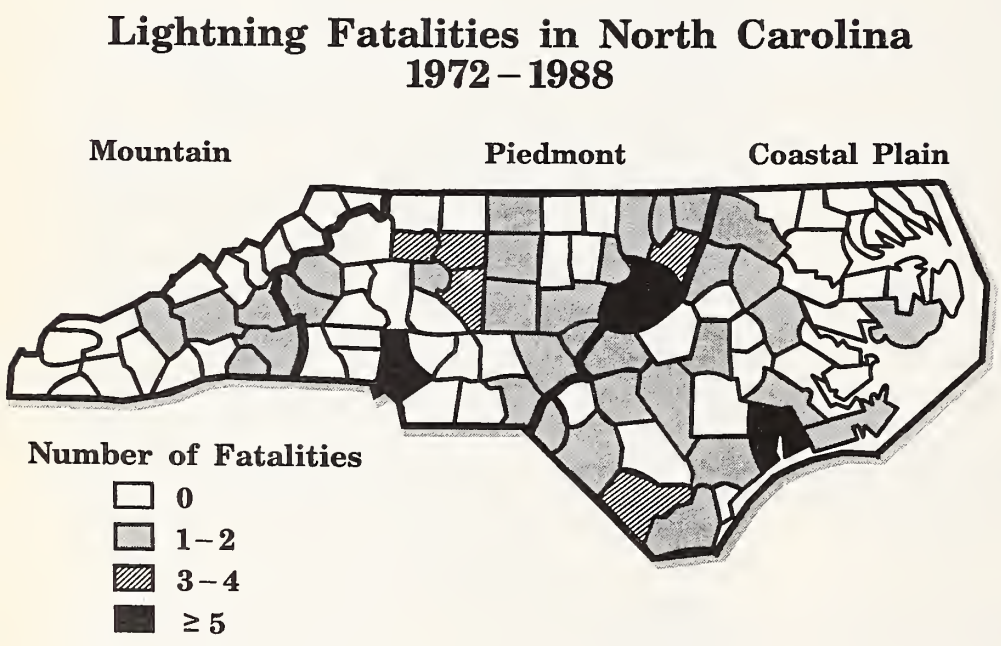
We identified seventy-five lightning-related fatalities from the medical examiner's files. One North Carolinian was injured in South Carolina, but died in a hospital in North Carolina. However, this person was a native of North Carolina and because of the similar geography and the proximity to North Carolina this case was included in the study. Over the

Table 1
Location and/or circumstances of 75 lightning fatalities in North Carolina, 1972-1988

	#	%	
	14	19	in farm, field or garden
	13	17	under trees
	8	11	under shelter/barn or garage
	7	9	in recreational fields or camping
	7	9	on beach, boat or fishing
	6	8	near clothesline
	5	7	in yards
	4	5	in or under house
	2	3	on golf courses
	2	3	using indoor telephone
	5	7	miscellaneous*
	2	3	unknown
Total	75	100	

* One each on bike; on path near home; mowing church yard; working on car; carrying downed electric line

Figure 1



17-year period, there was an average of 4.4 deaths per year with a range of 2 to 10 per year. The mean death rate during the period 1972 to 1988 was 0.8 deaths per million.

The age of the victims ranged from a fetus (gestational age 33 weeks) to 64 years, with 80% of victims between 15 years and 64 years of age. The mean age of the victims was 29.4 years with a median age of 25 years. In 1980, the median age for North Carolinians was 29.6 years.[13] In our study 17.3% were 0-14 years of age; 30.6% were 15-24 years of age; and 52% were 25-64 years. Seventy-nine percent of the victims were male, while men comprised only 49% of the state's population in 1980.[13] Caucasians accounted for 77% of the victims; blacks 19%. By race, North Carolinians in 1980 were 76% white and 22% black.[12] White males were victims four times as often as white females. Black males were victims almost twice as often as black females.

We reviewed cases by type of activity or location at time of injury (table 1). The majority of individuals struck by lightning were in an open field or standing under a tree at the time of injury.

Fifteen of the 75 individuals were at work when they were fatally injured by lightning. Of the 15, two were in the military and six were farmers working in the fields. Two of the farmers were migrant workers. Three farmers were on tractors when they were hit by lightning.

In 40 cases, the individual was directly hit by lightning. In 35 cases, the victim was indirectly hit. The majority of cases of indirect hits were standing under a tree or under an open shelter or barn at the time of injury. In 11 cases, more than one individual was killed or injured. In one additional case, a dog was also killed.

In 52 cases records report that the lightning injury was directly witnessed, while in 23 cases the event was not witnessed. Thirty of the victims received cardiopulmonary resuscitation (CPR). CPR may have been performed in other cases, but not documented in the RIME narratives. In 63 cases, the person was dead on arrival or within four hours of arriving at the hospital. Five individuals survived for more than a week, then died primarily from neurological injuries.

Alcohol level was measured in 42 of the 75 victims (55%). Six of the 42 (14%) had evidence of alcohol in their blood. Four of these six had levels equal to or above 100 mg%. Two of these six were working on the job when they were injured by lightning.

Ninety-two percent of injuries leading to death occurred between May and September, but a few also were injured in January and February. Of the 69 cases where time of injury is known, 86% occurred between 3:00 p.m. and 8:00 p.m.

Of the 74 victims fatally injured in North Carolina, the majority occurred in the Piedmont, followed by the coastal region and then the mountain region (figure 1). This probably reflects the greater population density in the Piedmont.

Discussion

Detailed data on nonfatal lightning injuries is not readily available for North Carolina. The National Climatic Data Center (NCDC) recently published a summary of lightning injuries in the United States from 1959 to 1988. During this period of time, 7,667 injuries and 2,869 deaths due to lightning occurred. For North Carolina, 398 injuries and 150 deaths were reported. These figures probably underestimated the true frequency of injuries because the NCDC data base consists mainly of information gathered from newspaper articles.[5] Few sources report information on lightning morbidity in North Carolina. The North Carolina Medical Database Commission recorded 10 discharges from North Carolina hospitals for lightning-related events in 1988. Five individuals (50%) were between 15 and 24 years of age, and five (50%) were between 25 and 64 years.[14] The best source of data regarding fatalities appears to be medical examiner data because of its completeness and accuracy.

The elevated male to female ratio is consistent with other studies.[5,7] Males may have a higher risk of exposure to lightning than females by nature of occupation or participation in outdoor activities such as hunting and fishing.

The time of injury and month of injury are also consistent with previous findings.[7,9] Most fatalities in our study occurred during the late afternoon and early evening hours of the summer months. It is important to note, however, that thunderstorms may occur during the winter months and that there have been lightning fatalities during this season.

Lightning should be considered a job-related hazard to individuals who work outdoors. Farm laborers were the profession at highest risk of lightning injury in Florida.[5] In our study, 40% of fatalities at work involved farmers, many riding tractors when struck. As a preventive measure, the National Weather Service recommends avoiding tractors during storms. It would be interesting to know whether enclosed cabs add any protection to farmers in fields during thunderstorms.

Even though rarely mentioned, people should be very careful when removing clothes from the clothesline when a storm approaches. Six individuals (8%) were directly or indirectly hit when removing clothes as a storm approached. Individuals can often be struck when it is not raining outside and when the main storm is not directly overhead.

Standing under a tree and/or working in a field are the two activities associated with the largest number of lightning fatalities in North Carolina. In these situations, the victim is either the tallest structure or is adjacent to the tallest structure in the vicinity of the lightning and is therefore a more prominent target.

Lightning, like other types of electrical current, causes damage by thermal injury or adverse changes resulting from current passing through the body.[15] Six factors determine the nature and severity of damage from electrical injuries. These factors are the resistance of the tissue, voltage of current, amperage of current, duration of contact, type of current, and pathway of current. Lightning bolts can reach energies of 30 million to 200 million volts and up to 200,000 amperes. Lightning strikes are instantaneous in duration of contact and of a direct current type.[1,4,9]

Lightning strikes can affect virtually every body system and may lead to permanent damage in the survivors. Feathering burns, also known as Lichtenburg figures, ferns, or arborescent markings, are pathognomonic of lightning injuries.[16] These markings usually resolve within 24 hours and may be the only clue to the etiology of injury or illness in an unconscious victim. Medical care providers should search for secondary injuries from falls.

The triage of lightning victims is different from triage for victims of other injuries. The individual who appears dead may be resuscitated successfully if given early attention. Lightning is a natural electrical discharge of direct current instead of alternating current as with man-made high voltage sources. Thus, asystole instead of ventricular fibrillation often results. Cardiac rhythm may spontaneously resume in victims of lightning injury and the individual may fully recover if respiration is maintained. Poor prognostic signs for survival include leg burns, cranial burns and cardiopulmonary arrest.[17]

Occasionally permanent sequelae may occur. Amnesia for the event, cataracts, ruptured tympanic membranes, hearing loss, and personality changes may develop in victims. Physicians should order follow-up ophthalmologic examination and auditory evaluation in patients with lightning injuries.[1,9,10,18,19]

Prevention

Most injuries and deaths from lightning are preventable. Individuals, especially those who work outdoors, should know how to protect themselves if a thunderstorm approaches. The following are recommended courses of action:[7,10,20]

1 Seek shelter indoors; keep windows and doors closed and avoid metal objects.
2 Stay inside a closed car.
3 Avoid contact with metal objects such as fences, golf clubs, fishing poles, rifles, tent poles, umbrellas, bicycles, farm equipment, railroad tracks, metal-cleated shoes, metal helmets and hairpins.
4 Avoid open fields, high terrain and bodies of water.
5 Avoid refuge under an isolated tree or other tall structure.
6 If caught in the open, seek low ground or lie on a raincoat in the fetal position.
7 Do not talk on the telephone, bathe, or use electrical appliances.
8 Consider installing lighting rods with proper grounding on buildings.
9 Stay away from the fireplace.
10 If in a boat, head for shore.

All levels of the school system should incorporate lectures on hazardous weather conditions in their health and physical education curriculum. Physicians should develop an information brochure on

lightning injuries for their patients, especially those engaged in outdoor activities. Messages on adverse weather conditions should be posted in recreation areas. Information booths on weather hazards should be offered at health fairs and at county and state fairs.

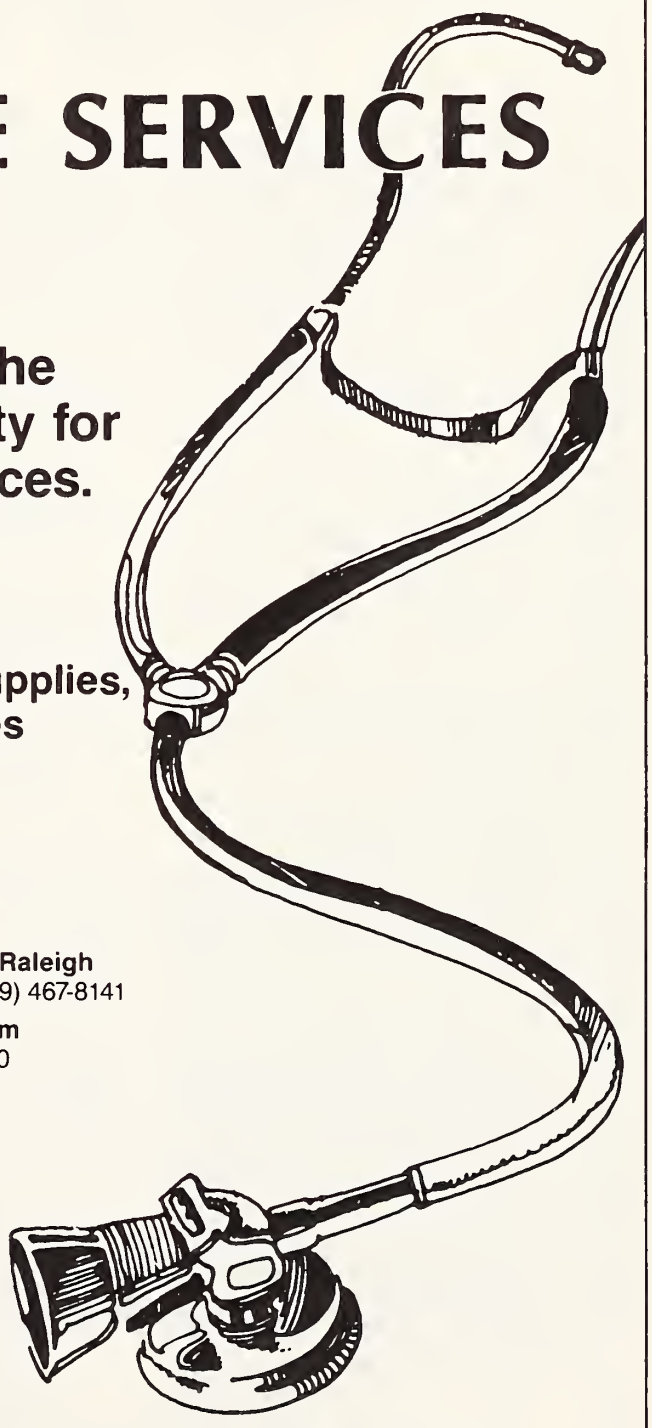
Summary

Individuals who are outdoors during thunderstorms are at risk for death from direct and indirect lightning hits. Death is more likely from 3:00 p.m. to 8:00 p.m. during the months of May through September. The fatality pattern in North Carolina is similar to that reported for the nation as a whole. Physicians are urged to discuss with their patients simple strategies for reducing exposure to lightning. ❑

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Letters to the Editor

A comment on Dr. Burke's article on the red fire ant

To the Editor:

I read with interest Dr. William A. Burke's review on the red imported fire ant (NCMJ 1991;52:153-8). The fire ant infestation had indeed spread to an alarming degree in the United States. Several documentaries have outlined the magnitude of damage to farm and residential property in the Southern states, especially East Texas and Louisiana. Dr. Burke commented that "the Charlotte area is not infested today," but unfortunately that is no longer the case. By way of imported plantings used in landscaping, several lakeside areas in Davidson (Lake Norman) are now infested with the red fire ant. They must have adapted to the cold and the clay soil, as they are as prolific there as they are in the warmer, sandy beach areas.

Having spent a great deal of time in Texas and Florida becoming an unwilling close acquaintance of the red fire ant, this discovery is unnerving at best. Prime recreational areas are threatened by this infestation as they are in the beach areas of Eastern North Carolina. We of the medical community should be in the forefront to educate the municipal sector to act quickly to control the spread of the red fire ant in North Carolina. I thank Dr. Burke for raising the issue, since with the red fire ant, one needs only a single encounter to indelibly register the painful truth of the problem.

John F. Camp, M.D.
Southeast Pain Management Center
P.O. Box 32861
Charlotte 28236

An open letter to Dr. Ralph E. Snyder of Medical Review of North Carolina, Inc.

Thanks for responding to my last "de la Mancha" letter (personal correspondence). I continue to be informed by my clinical colleagues about some of the situations singled out by you folks as warranting question, review, calls, letters or even censure (in an infuriating bureaucratic style which only your computer and system can create). This included a "level two" censure of a departed colleague ("without further chance of appeal"—whatever all of this means).

This continuing evolution of "from the top" intrusion into medical practice has stimulated me to think that we bottom rung practitioners need to organize ourselves into a "counter hassle" group which will better inform our society of the true costs of our current system.

I realize that MRNC is only a small part of the hassle,[1] and your particular hassle is dictated by the Federal Health Care Financing Administration, which seems to be confused about what you should do. I am confused on what effect your efforts have on cost or benefit. Since your organization is a public entity, maybe you can let me know the answers to the following questions!

a) What has been your annual budget for each of the past five years?[2]
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   1) cases were reviewed?
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   4) physicians were ultimately censured and at what level?

Maybe you would like to write this as a report in the *North Carolina Medical Journal*. I am sending this to Dr. Stead to publish, as I would like to know whether there is interest in a "counter-hassle" movement.

James A. Bryan II, M.D.
Division of General Medicine and
Clinical Epidemiology
UNC School of Medicine
Chapel Hill 27599-7005

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2 Realizing that this does not cover costs required of the places (hospitals, offices, physicians) with whom you interact, of whom you require paper, responses, etc., on your bidding.

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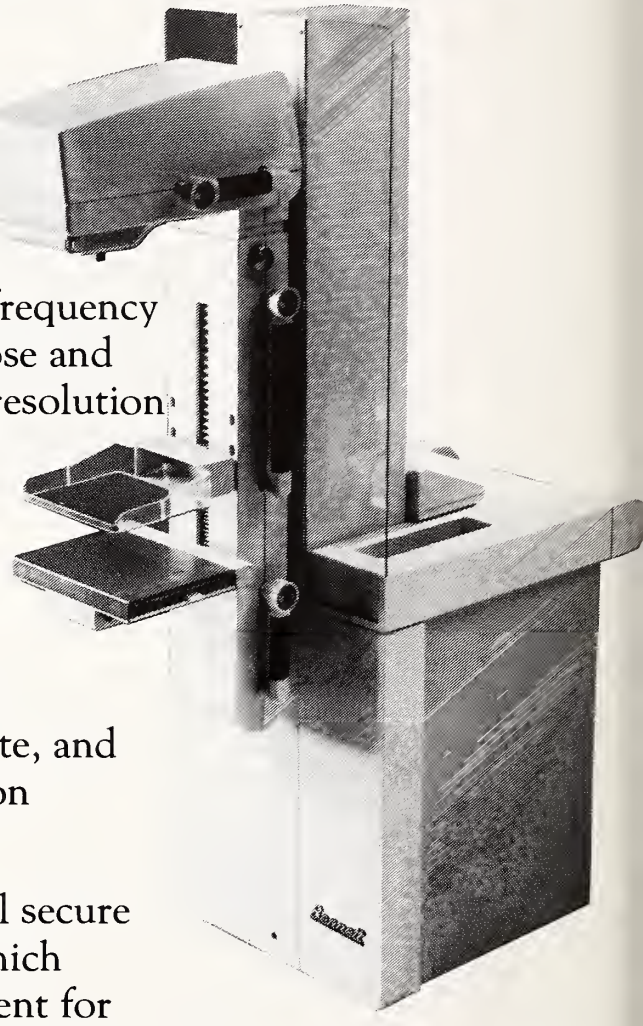
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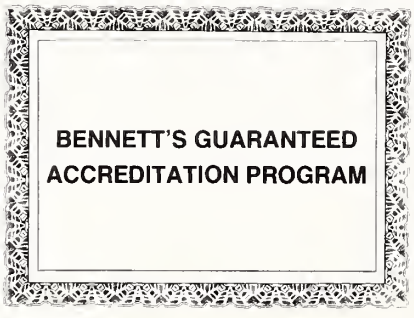
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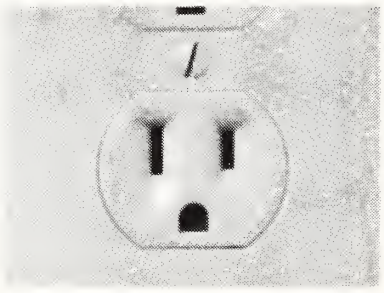


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For Doctors and their Patients

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Sarcoidosis Presenting as Large Pulmonary Nodules

J. Peter Cegielski, M.D., and William J. Fulkerson, Jr., M.D.

Sarcoidosis is a relatively common disorder in the southeastern United States and presents classically radiographically with bilateral hilar adenopathy, diffuse pulmonary infiltrates, or both. We report two patients with histopathologically confirmed sarcoidosis whose chest radiographs showed multiple large pulmonary nodules initially suggestive of metastatic neoplastic disease. The patients did not appear ill to the degree expected with disseminated neoplastic disease. Transbronchial biopsy yielded typical non-caseating granulomas of sarcoidosis.

Patient 1

A 27-year-old black woman was healthy until one week prior to admission when she developed exertional dyspnea which rapidly progressed to dyspnea at rest. She developed a cough one day prior to admission producing thick yellow sputum. There were no complaints of fever, chills, or sweats. She was treated with theophylline as an outpatient, but she failed to improve and was admitted to the hospital for further evaluation. Her past medical history was noteworthy for asthma with acute exacerbations precipitated by dust. She had smoked one pack of cigarettes a day for four years. There was no history of exposure to tuberculosis.

Physical examination was normal with the exception of mild upper airway rhonchi and a II/VI systolic ejection murmur. Arterial blood gases on room air showed pH 7.38, pCO_2 38 mm Hg, and pO_2 77 mm Hg.

Her chest radiograph showed multiple large pulmonary nodules, hilar adenopathy, and possible mediastinal adenopathy (figure 1A). Computerized tomography of the chest confirmed the parenchymal masses and hilar and mediastinal adenopathy (figure 1B). Pulmonary function tests revealed mild restrictive lung disease with a total lung capacity (TLC) of 3.89 liters (73%), no obstructive disease, and significant reduction in the diffusion capacity for carbon monoxide (DLCO) to 56% predicted. Fiberoptic bronchoscopy was performed and revealed a normal tracheobronchial tree. Transbronchial biopsies of the nodular lesions in the right lung showed non-caseating granulomatous inflammation consistent with sarcoidosis. Special stains were negative for acid fast bacilli and fungal organisms.

The patient was begun on prednisone 60 mg daily and continued on oral theophylline. Follow-up chest radiograph two months later showed decrease in the size of the pulmonary nodules. Pulmonary function tests showed no significant change. Her steroid dose was gradually decreased. Repeat chest radiograph four months after diagnosis while on 20 mg prednisone daily showed further decrease in the pulmonary opacities.

Patient 2

This 29-year-old black woman was well until two weeks prior to admission when she developed a dry paroxysmal cough, diffuse severe myalgias, a bifrontal headache, and fever to 102°F. Ten days prior to admission her myalgias became localized to her legs and were described as a constant ache. Her headaches resolved, but the cough, fever, and leg pain continued. Her physician diagnosed bronchitis, which he treated with cephalexin (Keflex®).

When her symptoms did not resolve she came to the emergency room for evaluation and was admitted. She denied any former history of lung disease, asthma, tuberculosis or pneumonia. A grandmother had had tuberculosis, but the patient had had negative tuberculin skin tests in the past. There was also a past history of nephrolithiasis two years prior to admission. She smoked approximately five cigarettes per day.

Physical examination was remarkable for bibasilar crackles on chest exam, an S4 gallop, and mild bilateral upper quadrant abdominal tenderness. There was also mild distal lower extremity tenderness to palpation, but there was no edema, rash, or joint abnormality. An

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arterial blood gas on room air showed pH 7.40, pCO_2 36 mm Hg, and pO_2 81 mm Hg.

A chest radiograph revealed multiple large pulmonary nodules with the largest in the right upper lobe measuring 6 cm x 6 cm and bilateral hilar adenopathy (figure 2). Pulmonary function tests showed a TLC of 3.25 liters (77% predicted), no obstruction, and a DLCO of 14.8 ml/min/mm Hg (80% predicted). Fiberoptic bronchoscopy was performed which revealed an unremarkable tracheobronchial tree. Transbronchial biopsy from the right upper lobe showed non-caseating granulomas with negative stains for organisms.

The patient was discharged and started on prednisone 60 mg daily at follow-up. A chest radiograph one month later showed decreasing size of the lung nodules and the patient was asymptomatic. Her prednisone was decreased to 30 mg daily.

Discussion

Although the etiology of sarcoidosis is not known, the pathogenesis appears to involve an immunologic mechanism. It is thought that an unidentified antigen elicits an unbalanced or exaggerated helper T-lymphocyte response which leads to an inflammatory alveolitis, granuloma formation, and fibrosis.[1] Paradoxically, peripheral T-helper cell count and cell mediated immunity are markedly depressed.[1] Organ dysfunction in sarcoidosis results from disruption of the normal functional architecture of the tissue by space occupying lesions and from fibrosis. The disease process is widespread; granulomas can be found in most organs in the majority of patients.[2]

Clinical manifestations at the time of initial presentation refer primarily to intrathoracic, skin, and ocular involvement. Ninety-four percent of patients have pulmonary involvement, 73% have hilar or mediastinal adenopathy, 32% have dermatologic features (especially erythema nodosum) and 21% have ocular involvement.[3] Roughly two-thirds of patients have respiratory symptoms or signs, primarily dry cough and dyspnea. Systemic symptoms of malaise, fatigue, weight loss and fever are also common.[3]

Over 90% of patients have abnormal chest radiographs at the time of initial diagnosis.[1,4] Bilateral hilar adenopathy with or without associated diffuse pulmonary parenchymal involvement is present in the majority.[1,4] When parenchymal involvement does occur it is most commonly described as a diffuse, symmetric, reticulo-nodular interstitial pattern (40% to 50%).[5] Also common is the so-called acinar pattern (20%), which consists of diffuse, indistinct, small (6 to 7 mm) opacities that can be discrete or confluent.[5] Interstitial fibrosis from irre-

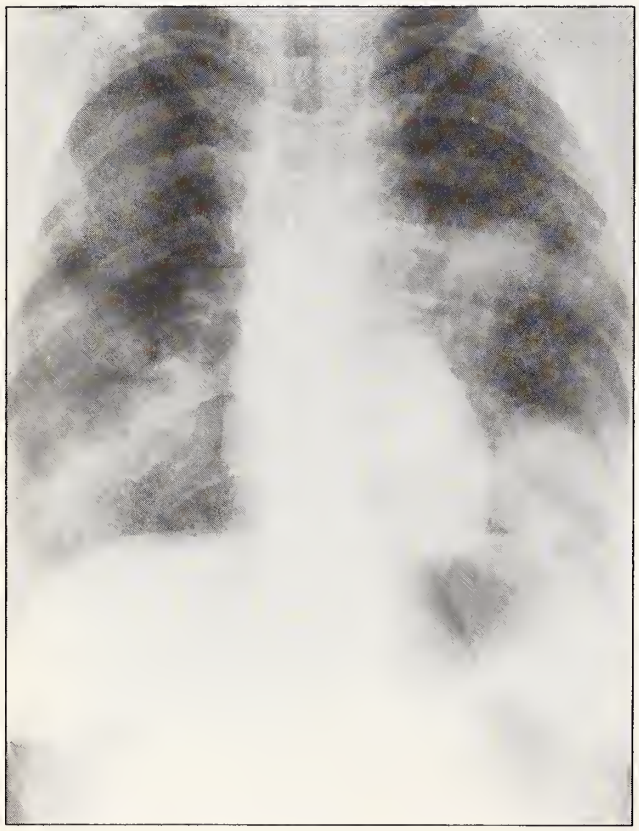


Figure 1A. PA chest radiograph of patient #1 showing large bilateral masses and hilar adenopathy.

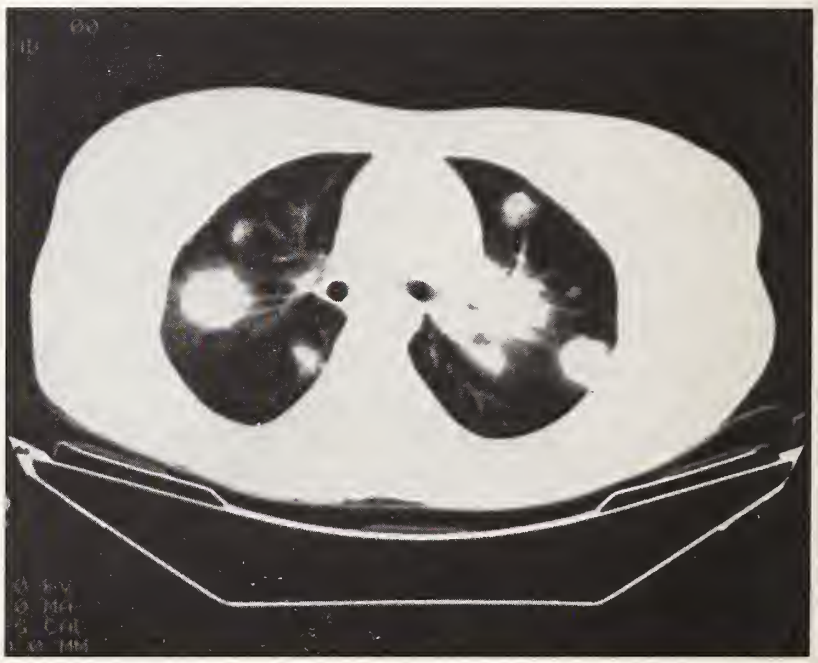


Figure 1B. Chest CT scan of patient #1 showing discrete parenchymal masses.



Figure 2. PA chest radiograph of patient #2 showing large pulmonary masses bilaterally and hilar adenopathy.

versible pulmonary injury occurs in 20% of cases.[1,6] It is usually a coarse linear streaking pattern radiating from hila to periphery, uneven in distribution, and associated with structural deformation of the lungs. Blebs, bullae, bronchiectasis, frank emphysema and retraction of tethered structures, including the hila, result.[6]

The cases presented here illustrate an unusual radiographic picture of sarcoidosis.[1,7] The first two cases of large nodular sarcoid were reported in 1952 by McCord and Hyman.[8,9] In an analysis of 150 abnormal chest radiographs out of 162 patients with sarcoidosis, Kirks et al. report only three patients (2%) with large pulmonary nodules.[5] Similarly, Sharma et al. describe six cases out of a series of 150 (4%) who roentgenographically manifested multiple large pulmonary nodules.[10] More recently, Romer reported two of 126 consecutive cases (1.6%) from Denmark with large nodular lesions,[11] while Onal et al. collected five cases from a large Midwestern Veterans Administration hospital.[8]

In contrast, in a series of 300 chest radiographs of patients with sarcoidosis reported by Freundlich et al., there were no cases of multiple large pulmonary nodules.[6] An extensive review of the manifestations of sarcoidosis from the records of 1,254 patients presented by Mayock et al. failed to mention any patients with this particular radiographic manifestation.[3]

The large multi-nodular pattern suggestive of metastatic carcinoma can also occur with metastatic sarcoma or lymphoma, fungal or mycobacterial infections, and immunologic disorders (Wegener's granulomatosis and rheumatoid lung). In addition, this pattern has been reported as a manifestation of pulmonary arterio-venous fistulae, multiple benign leiomyomas, hydatid cysts, pulmonary infarcts due to bland or septic emboli, hamartomas, multiple hematomas, multiple bronchial adenomas, and even extramedullary hematopoiesis.[10] Also, the entity referred to as necrotizing sarcoid granulomatosis has been considered by some as a form of large nodular pulmonary sarcoid.[12]

Clinical studies comparing the features, natural history, and response to therapy of the presentation of sarcoidosis discussed here are limited by the rarity of its occurrence. Only two other reports discuss the pulmonary physiologic manifestations of this presentation of sarcoid.[4] Our findings of restrictive lung function agree with these authors, and with the most common forms of the disease. Similarly, reported cases reveal no clear differences in the clinical presentation or course of the disease between patients with this atypical picture and patients with the more common clinical presentations of thoracic sarcoidosis. Histologically, the masses consist of large-scale coalescence of many typical granuloma matted together by fibrosis and interlaced with few mononuclear cells.

There are only a few other unusual radiographic manifestations of sarcoid. Cavitation within large pulmonary nodules is exceptionally rare, having been reported in nine cases.[13,14] Other cavitary lesions occur in general in 1% to 2% of patients[3,15] although Freundlich reported 25 of 200 patients with cavities, 10 of which had associated mycetomas.[6]

Atelectasis due to obstructing endobronchial lesions with or without associated post obstructive pneumonitis occurs in 0.5% to 1% of cases.[3] The pleura is involved in less than 5% of cases of sarcoidosis, and pleural effusions occur in 0.7% to 4% of cases when granulomatous involvement is extensive.[1,3,5] The effusion is exudative and contains a strong lymphocytic predominance. Pleural biopsy in these cases often reveals the typical non-caseating granulomas.

Finally, spontaneous pneumothorax and osteolytic or osteosclerotic lesions involving vertebrae and shoulder girdle have been reported.[3,15]

In summary, our two cases of sarcoidosis occurred in relatively young black women who presented with systemic and pulmonary symptoms, and whose chest x-rays showed multiple large discrete pulmonary nodules and hilar adenopathy. By themselves the radiographs suggested advanced metastatic disease, but our patients did not appear ill to the degree expected with disseminated neoplastic disease. Bronchoscopy and transbronchial biopsy yielded typical non-caseating granulomas of sarcoidosis.

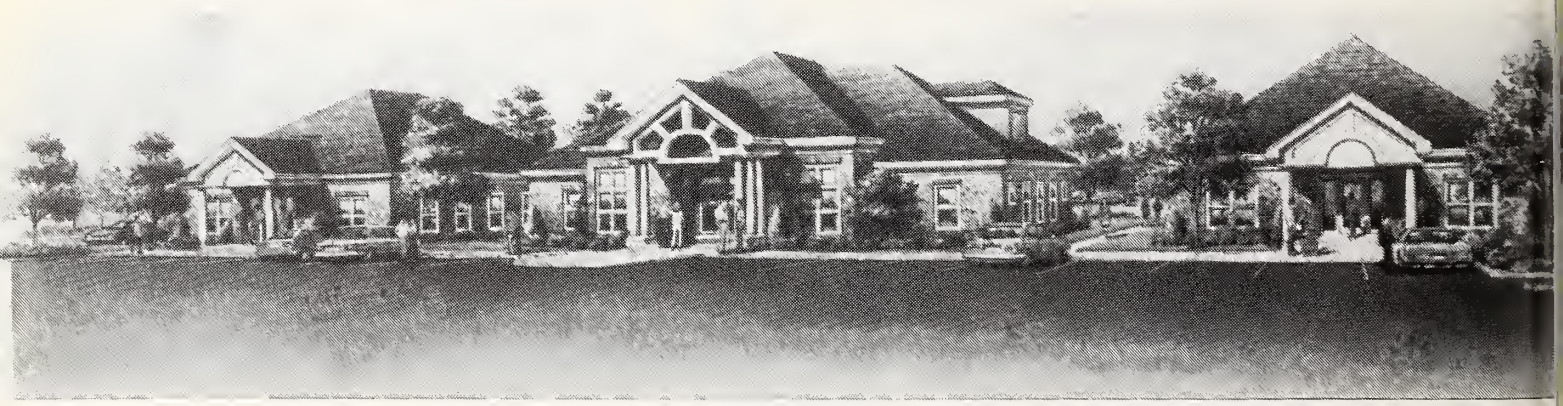
Both patients have responded symptomatically and radiographically to corticosteroid therapy. We wish to call attention to sarcoidosis in the differential diagnosis of multiple large pulmonary nodules in the appropriate clinical setting. ❑

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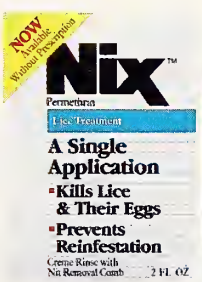
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Worrisome Rash in an Undergraduate

Eugene Z. Oddone, M.D., and Matthew Brown, M.D.

An 18-year-old white Duke University woman undergraduate was admitted through the emergency room on December 14, 1989 with headache, nausea and vomiting of one day's duration. She had no previous medical history and was in her usual state of health, studying for final exams, until two days prior to admission when she noted diffuse myalgias and generalized malaise. She had mild back pain in the lumbar area as well as the cervical area and a generalized, nonthrobbing headache.

Early in the morning of December 14 her symptoms worsened, with a marked decrease in appetite, a sore throat and a dry mouth. Her headache and myalgias increased and she felt feverish with chills. She noted nausea throughout the morning and vomited four times without hematemesis. She presented to the student infirmary at 11 a.m. with a temperature of 38.2°C. Physical exam at that time was otherwise normal.

Throughout the next several hours she had one more episode of vomiting, became increasingly lethargic, and answered questions inappropriately. She developed an erythematous, nonblanching rash over her arms, trunk and lower extremities.

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She denied any history of rhinorrhea, trauma to her head, ear discharge, cough or sputum production, or previous sinus problems. Her last menstrual period was three weeks prior to admission. She used regular tampons and had no previous history of a similar condition. She was not sexually active.

Physical exam showed her to be lethargic but alert, oriented to place and only intermittently oriented to time. Blood pressure was 85/65, pulse 120 supine, temperature 40.2°C, and respiratory rate 20. There were nonpainful erythematous, blanchable patches on her palms and wrists, and a petechial rash was present over her trunk, shoulders and lower extremities. Her eye exam was significant for two hemorrhagic lesions in her right bulbar conjunctiva as well as several petechial lesions on the palpebral conjunctivae. Her fundi showed sharp discs, normal venous pulsations, and no hemorrhages or exudates. Her ear exam was significant for mildly erythematous, tympanic membranes bilaterally, without air fluid levels. There were multiple petechial lesions in the soft palate with no exudates or tonsillar swelling. The heart and lungs were normal. The remainder of the physical and neurological exam was normal except for the altered mental status.

The patient was admitted that evening through the emergency room. On admission the hemoglobin was 13.9 gm/dl, hematocrit reading 41, and white count 14,200 with 82% polys, 13% bands, 3% lymphs and 2% monos. Platelet count was 246,000. The serum sodium was 133, chloride 100, and bicarb 23. Urinalysis was normal except for 2+ ketones on dipstick. Chest x-ray was normal.

Upon arrival at the emergency room at 6 p.m. the patient underwent an immediate lumbar puncture. Opening pressure was not recorded. The cerebrospinal fluid (CSF) was clear with 40 mg of protein/dl and 67 mg of glucose/dl. Cell count showed 30 red cells and 86 nucleated cells with a differential of 94% granulocytes and 6% band forms. Gram stain of the CSF showed gram negative diplococci.

The presumptive diagnosis of neisseria meningitis was made and the patient was placed on three million units of penicillin G every four hours. She also required intensive fluid support to elevate her blood pressure. Cultures of blood and cerebrospinal fluid were positive for *Neisseria meningitidis*, group B. She defervesced within 36 hours of admission and was discharged feeling well on the fourth hospital day. There have been no other reported cases of neisseria meningitis at Duke this year.

Discussion

This case illustrates a classic presentation of meningococcal meningitis. Hallmarks to the diagnosis include the patient's acute presentation (less than 48 hours), fever, headache, vomiting, confusion, and petechial rash.

Acute bacterial meningitis is a medical emergency. McGee and Baringer

report that the death rate is high at 30% and has changed little in the last 25 years.[1] They list several important points aimed at lowering the mortality of acute bacterial meningitis: (1) early recognition of clinical syndromes likely to represent meningitis; (2) rapid interpretation of the most likely etiologic organisms; (3) rapid initiation of the appropriate antibiotic therapy (within 30 minutes); and (4) early recognition and treatment of the consequences of septicemia that accompany meningitis (acidosis, disseminated intravascular coagulation, and hypoxemia).

The most common organisms causing bacterial meningitis in an adult are *Streptococcus pneumoniae*, *Neisseria meningitidis*, and less commonly *Haemophilus influenzae*, and *Staphylococcus aureus*.[2,3] The vast majority of patients can be diagnosed by gram stain of the sediment of spun cerebral spinal fluid.

Meningococcal meningitis is a particularly worrisome disease. First, it can be a rapidly progressive systemic disease with approximately 50% of hospitalized patients dying within the first 24 hours of admission.[1] Second, certain serogroups (A and C) are often associated with minor epidemics in patients living closely together, such as armed forces recruits and college students. Serogroup B, which our patient had, is the primary cause of isolated cases.[1]

The key to the diagnosis in our patient was the development of a petechial rash. While isolated cases of petechial rashes have been reported in other forms of meningitis, such as echo virus, pneumococcus, and staphylococcal species, these episodes are very rare.[1] Approximately 50% of patients with meningococcal meningitis will develop petechiae or purpuric skin lesions. This represents clinically disseminated disease which may also result in such other signs of widespread infection as disseminated intravascular coagulation, hemorrhagic infarction of the adrenal glands, renal cortical necrosis, pulmonary vascular thrombosis, shock and death.[1]

The treatment of choice for this disease is early antimicrobial therapy (crystaline penicillin G, 50,000 units per kg intravenously every four hours). Aggressive supportive measures are often necessary, including control of acidosis, hypoxia, blood pressure and disseminated intravascular coagulation. There is no proven efficacy for empiric use of corticosteroids in bacterial meningitis in adults. A recent randomized control trial in children with bacterial meningitis showed no improvement in mortality, but a significant improvement in post-infection deafness in dexamethasone treated children.[4]

This case illustrates the importance of a rapid clinical evaluation and initiation of treatment in patients with suspected bacterial meningitis. Clinical suspicion of meningitis is the most important step in the diagnostic tree. In a patient with normal optic discs and no focal neurological signs, a lumbar puncture should be the first procedure in evaluating the cause of disease. ❑

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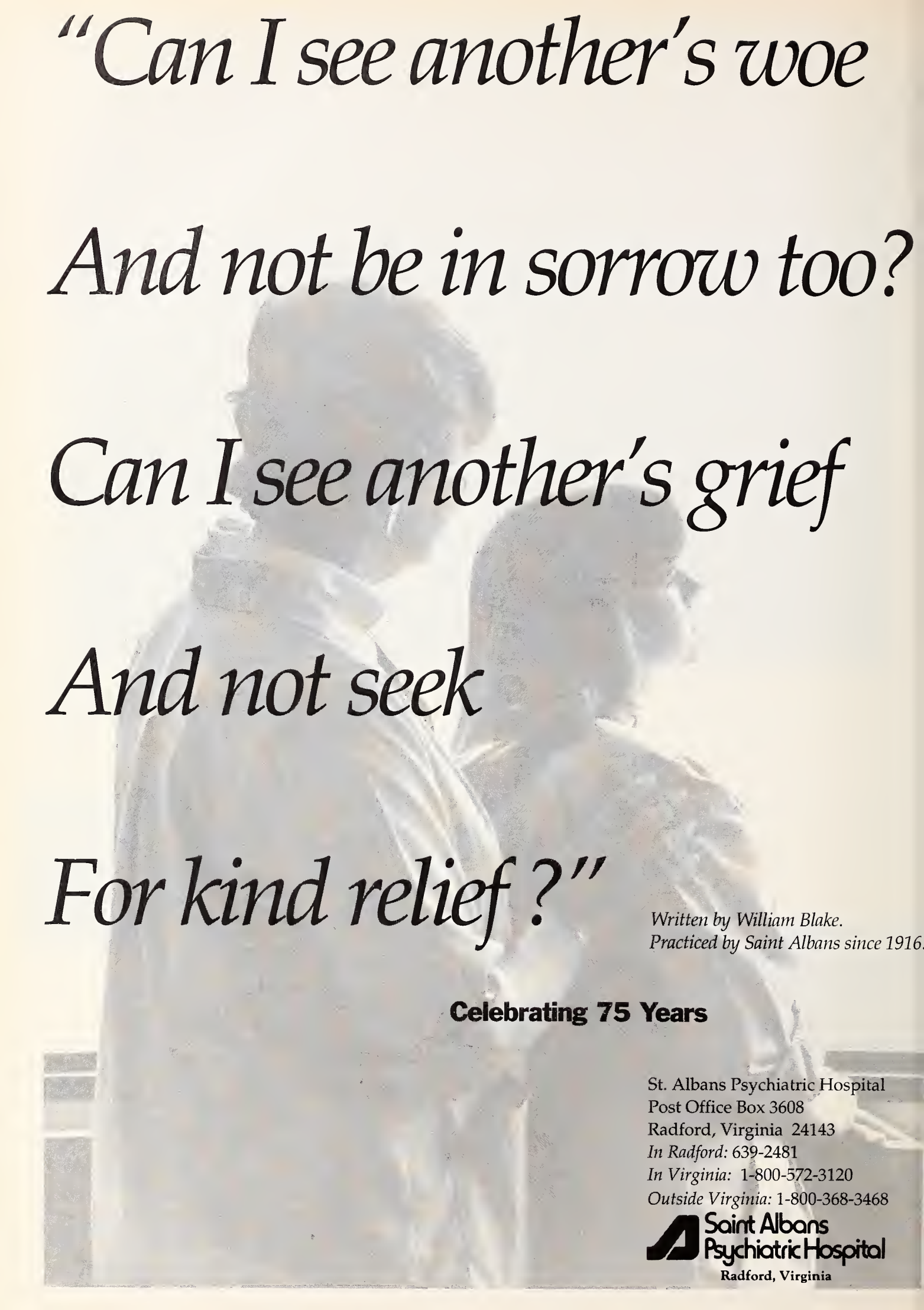


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Examination Without Interview

Learning about the Physical Examination as a Diagnostic Tool

George H. Maxted, M.D., William J. Blackley M.D., and Francis A. Neelon, M.D.

Several years ago, we devised a self-learning program to improve our performance as physical diagnosticians. We wanted a mechanism that would concentrate our attention on the task of honing our skills in physical examination, but would also provide a means by which we could judge our performance. We, therefore, set out to see what we could learn from a thorough physical examination of patients whose history we did not take and to whose written case history we did not have access.

Although we did not know so at the time, the strategy is highly reminiscent of what Rufus Cole called "the method of Zadig," a name given by him to the exercise in which William Osler and his students would examine "patients chosen at random, whom neither [Osler] nor the students had ever seen before. With no other aids, teacher and students attempted to learn all they could by observation alone. They employed the method of Zadig, that of making deductions or inferences from inconspicuous features."[1] We conceived of ours as a didactic exercise, but we did learn a lot about the diagnostic power and value of the physical examination. We review those lessons in this paper.

From Box 3021 Duke University Medical Center, Durham 27710.

Background

Most clinicians usually cede primacy in diagnosis to the medical history. Generations of medical students have heard some version of the statement by Platt that "history-taking is the greatest art in medicine."[2]

There are many variations on the theme of history as the bulwark of diagnosis, but Platt did provide some data derived from an empirical study of diagnosis in 100 consecutive patients (he excluded cases in which the diagnosis was already fully established). The data in Platt's paper are sketchily presented and therefore difficult to interpret accurately, but it appears that, after taking a history and before any physical or laboratory examination, he reached a certain or highly probable diagnosis in 77% of cases (for 5%, the diagnosis after history was wrong and for 19%, no diagnosis was made).

A more rigorous, experimental study of the relative diagnostic merits of history and physical exam was carried out by Hampton and his colleagues, who studied 120 outpatients referred to a medical clinic in England.[3] They excluded 40 patients with hypertension and then recorded their diagnostic impressions on the remaining 80 at each step in the following sequence: (1) after reading the referral letter sent with the patient; (2) after taking their own medical history; (3) after examining the patient; and (4) after carrying out laboratory examinations. Two months later they reviewed the patient records and decided at which point in the sequence they had achieved what was eventually shown to be the ultimate diagnosis.

After reading the referral letter, they came to the correct diagnostic conclusion in 41% of the cases, and after adding their own medical history, they had a correct diagnosis in 82%. After adding a physical exam, the cumulative correct diagnosis had reached 91%, and after all laboratory testing, 96%. In three patients they never did reach any final diagnostic conclusion. Hampton et al. concluded that "the medical history provided enough information to make an initial diagnosis ...which agreed with the one finally accepted" in 66 (82.5%) of the 80 patients, but the "physical examination was useful in making the diagnosis in only seven" (8.8%).

This sweeping conclusion implies a diagnostic superiority of interview over examination that has been repeated, with citation, many times since, but we believe that it is not supported by the study of Hampton, et al., for the following reason: Patients were removed from further consideration once a correct diagnosis had been achieved, and the sequence of operation was such that historical methods were always applied first (as, admittedly, is usually the case in the clinic). As

a result of their method, though, the size of the population eligible to be diagnosed at steps later in the sequence (namely, physical and laboratory examinations) continually diminished. The ability of the physical examination to afford diagnosis was, therefore, not applied to all 80 patients but only to the 14 who had not already been diagnosed by history. In point of fact, the physical exam was successful in seven (50%) of these 14 and laboratory examination gave a correct diagnosis in four (57%) of the remaining seven undiagnosed patients! Seen in this way, the physical and laboratory exams more than held their own as diagnostic modalities, especially when we consider that these techniques succeeded precisely (and in this study, only) in those cases where the history had failed. Remember, too, that hypertensive subjects, in whom we would expect the physical exam to be particularly helpful, had been systematically excluded from the study cohort. Similar arguments about the interpretation of results apply to the earlier study of Platt.[2]

A somewhat later study, by Sandler,[4] used the same sequence of medical history, then physical examination and, finally, lab examination. He reported that the history gave a correct diagnosis in 56% of 630 patients while the physical exam contributed the diagnosis in 17%. But his sample contained 180 patients with chest pain in whom diagnosis was derived from history in 90% and from physical exam in none. In the remaining 450 patients with other health problems, history contributed 42% of the diagnoses and physical exam, 24%.

It is clear that the physical exam, properly used, is quite a good diagnostic tool. Both Hampton et al. and Sandler agreed that data from the physical examination were helpful in management decisions, and Platt and Hampton et al. pointed out that the addition of physical findings often changed their level of confidence in the diagnosis derived from the history.

Table 1. Results of Examination Without Interview in Nine Inpatients

	Total	Mean/Patient	Range
Previously Unrecorded Findings:	190	21.1	11-31
Previous Findings Missed:	20	2.2	0-6
Duration of Examination (Min):		45.0	35-55

Results of Our Project

Our own data were collected in two stages. In the first part of the study, one investigator (WJB) examined a convenience sample of nine hospitalized, but not desperately ill, patients who agreed to permit examination without providing a medical history. Following the completion and recording of his exam, he then retrieved the hospital chart and compared his findings to those in the record. As shown in table 1, he noted an average of 21 physical abnormalities per patient that were not recorded in the hospital chart; he also failed to detect an average of 2.2 abnormalities per patient. To our surprise, the physical examination, unguided by history, took a long time to complete, averaging 45 minutes per patient. Many of the abnormal findings were relatively or completely trivial, but several, examples of which are shown in table 2, were of at least potential medical importance and were not noted in the medical record.

Table 2. Examples of Findings Not Noted in Hospital Chart

Tinea Pedis
Femoral Bruits
Nasal Septum Perforation
Hepatomegaly
Postural Hypotension
Arrythmia
Optic Fundus Hemorrhage

Table 3. What the Examiner Learned by Examining Without Interview

1. Exam compromised by "clues" in room
2. Patients always want to "tell their story"
3. Describing is more difficult than "Diagnosing"
4. One looks at the patient with new eyes
5. Exam yields the clues to Diagnosis rather than merely providing confirmation of hypotheses derived from history
6. Patients amazed that the examiner "just knows" what is going on with them

At the conclusion of this phase of our study, the examiner summarized (table 3) what he thought he had learned in addition to an embellished sense of prowess in physical examination. He recommended that, in the future, exams be carried out in a "neutral" site since the hospital room was laden with clues to diagnosis[5] such as IV bottles, dressings, pill boxes, reading materials, etc., that could not fairly be called physical examination data but did contribute to diagnosis (à la Zadig[6]). He found that the patients always wanted to "help" him by telling their stories of illness, and he had to warn them not to provide historical information. Describing the nature of abnormal findings proved to be more difficult than merely applying some diagnostic label that would, more or less, encompass the findings without forcing the examiner to specify the precise nature of his finding. He did think that the need to see all that was there had caused him to sharpen his examination skills and had led to a new and keener way of looking at patients, especially since the exam gave

Table 4. Conditions detected by physical examination

A. Certain from physical exam
- Aortic Insufficiency
- Cor Pulmonale
- Pneumonia
- Myopathy
- Atrial Fibrillation
- Cardiomyopathy

B. Suspected from physical exam
- Rheumatic Heart Disease
- Cardiomyopathy
- Pneumonia (2 cases)
- Alcohol Abuse
- Steroid Euphoria
- Cerebellar Infarction
- Aortic Stenosis (2 cases)
- Congestive Heart Failure
- Benign Prostatic Hypertrophy
- Lung Cancer

Table 5. Conditions not established by physical examination

A. Established by medical history
- Penicillin Allergy
- Gout (asymptomatic)
- Peptic Ulcer
- Esophageal Reflux
- Hypertension (treated)

B. Established by laboratory testing
- Digoxin Toxicity (*)
- Lung Cancer (**)
- Folate Deficiency (**)
- Trichomoniasis (*)
- Polycythemia Vera (**)
- Carpal Tunnel Syndrome (**)
- Anemia of Chronic Disease (**)
- Gonococcal Endocarditis (*,**)
- Acropachy (**)
- Rheumatoid Arthritis (*,**)
- Adenocarcinoma of Liver (**)
- Atypical Mycobacteria Infection (*,**)
- Septicemia (*)
- Histiocytic Lymphoma (*)
- Chronic Renal Failure (*)
- Myopathy (**)

* History provided some clue to diagnosis.
** Physical examination provided some clue to diagnosis.

the only clues to underlying disease rather than simply confirming hypotheses that had been generated by the patient's history. Finally, patients were amazed that he could "know" what was wrong just by "looking" at them, without asking them what had happened. This was the closest he has come to magic.

Based on what we had learned in our first phase, the second examiner (GHM) carried out a similar examination without interview on a convenience sample of 16 hospitalized patients. These subjects were studied in a neutral exam room, and a carefully structured physical examination routine was followed. Abnormal findings were grouped into plausible diagnostic categories, and a score of relative confidence ("possible," "probable," or "certain") was assigned to each diagnosis. The hospital charts were then surveyed and all active diagnoses were listed along with the relative contribution to each diagnosis of the charted history and laboratory examinations.

There were 39 active medical diagnoses for the 16 patients. Six of these diagnoses (table 4A) were made with certainty by the experimental examiner. These were: aortic insufficiency, cor pulmonale, pneumonia, myopathy, atrial fibrillation, and cardiomyopathy. Other diagnoses, suspected from examination but needing confirmation by the history, are shown in table 4B. These included rheumatic heart disease, cardiomyopathy, pneumonia, alcohol abuse, steroid euphoria and cerebellar infarct.

Some problems were not diagnosable by the unaided physical exam. Table 5A shows those, none of them surprises, that were derived from the medical history and that had no presently active physical manifestations. Overall, laboratory examination (table 5B) was the greatest single determiner of definitive diagnosis in this hospitalized population.

Table 6 shows summed data for all 16 patients and gives our estimates of the level of diagnostic certainty provided by each part of the clinical examination. For 29 of the 39 problems (see tables 4 and 5), there was overlapping diagnostic evidence from two or three of the modalities. Interestingly, the physical exam gave at least some clue as to the existence of 29 of the 39 diagnoses but gave certitude for only six. History and laboratory exam fared equally well as detectors of diagnoses (21 of 39), but evidence from history was considered sufficient to give certitude in only 12 of the 21. On the other hand, and in keeping with modern beliefs about how diagnosis is made, in 21 of the 21 cases where the lab said it was so, we believed it; nowadays a laboratory diagnosis is considered a certain diagnosis.

Table 6. Relative certainty of 39 diagnoses

	Possible	Probable	Certain	Total
Physical Examination	11	12	6	29
Medical History	3	6	12	21
Laboratory Testing	—	—	21	21

Discussion

Although it would be possible to argue with some conviction that the efforts of Auenbrugger (percussion) and Laennec (auscultation) in physical examination first set medical practice on the path of clinical science, there seems little doubt that physical examination is undervalued today. As Fitzgerald has pointed out, this devaluation of physical examination results from an unwarranted fascination with technology and from a lack of rigorous scientific proof about the performance characteristics of the physical

exam.[7] Doubtlessly, too, the laudable desire of teachers of medicine to emphasize to their students the clear value of becoming skilled interviewers has had the unwarranted effect of allocating physical exam to a "back seat."[2] Finally, the few studies that have set out to look at the relative contributions to diagnosis of history and physical examination[2-4] have been so designed (in our opinion) as to mislead most readers about the relative merits of each modality.

From the observations that we made during the exercises reported here, we conclude that the physical exam is quite valuable, moreso than is generally believed, but that its relative contribution depends (not unexpectedly) on the universe of diagnostic problems to which it is applied. Nevertheless, it is a powerful component of the diagnostician's armamentarium and should not be disregarded or condemned with faint praise.

As students we should learn (or recapture) the pleasure and excitement of becoming what Fitzgerald and Tierney called "the bedside Sherlock Holmes"[5] (himself, by the way, a disciple of the method of Zadig). Careful observation and accurate inference, informed by a deep understanding of how the body works and how it goes awry, are the hallmark of the scientifically competent physician.[8] We do ourselves no credit when we dismiss or do not emphasize the value of learning to perform accurately[9] and to interpret correctly the physical examinations we offer to our patients. We need to affirm the value of an accurate examination to our patients and the trust they put in the conclusions we draw from it; to recognize the value to ourselves as practitioners in time saved and in the satisfaction derived from hitting the target, first try.

To reemphasize: the physical examination and the medical interview are redundant; they, and the laboratory examination, complement and buttress each other, providing a fail-safe mechanism for diagnosis. To ignore or to undervalue any of these modalities is to limit our abilities to help our patients.

Physicians skilled in the physical examination and able to draw proper inferences from the clues it provides are doubly clever—they come to the "right" diagnostic conclusions and they seem to do so as though they had second sight. ❑

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"Reach to My Complaining"

Patients as Storytellers

S. Bryant Kendrick, Jr., D.Min.

Several years ago I served as a Chaplain in the outpatient clinic at North Carolina Baptist Hospital. The time of year came when the conclusion of training was upon us. Over the preceding three years, I had worked closely with several of the medical residents, trying to help them not only care for but also learn from the multi-faceted complaints of their patients.

One day I asked if I might go with a particular resident to visit an elderly black woman who had been his patient for the three long years of his residency. When we had entered the room and made the usual greetings, I mentioned to the patient that this would be the last time that this physician would be seeing her, since he would soon be leaving the training program for his own practice. Before he left us for good, I wanted to know if she thought he was a good doctor, ready to be out on his own. Without hesitating a bit, she turned to me and said, "Mr. Chaplain, he's a good one! I believe the Lord sent him to reach to my complaining." With that endorsement, I felt confident that he was ready to enter the field of private practice.

From the Department of Internal Medicine, The Bowman Gray School of Medicine, Winston-Salem 27103.

"Patients don't present themselves first and their complaints second. ... Rather, they 'tell stories' about themselves, as persons who are suffering with a disease..."

"Reach to my complaining"—this poetic phrase straight from the heart of an elderly black woman has stayed with me since that day and has become one of the guiding principles by which I seek to understand and teach the helping process and that aspect of it called the medical interview.

In order to reach to a patient's complaining, physicians need an interview technique that opens up access to two different kinds of information—specific information about a patient's disorder and information about the patient as a person. These two kinds of information reflect the fact that a physician, while responding to clues emerging from an objective domain—the domain of the patient's body—must also respond to clues from the patient's subjective domain—the patient's "personal context," including the patient's evaluation of what the symptoms mean, expectations for treatment, and the lifesetting in which the symptoms have been formed. Information from these domains serve both diagnostic and prognostic ends: it helps one answer the two primary questions of medicine: "What is going on now?" and "What is likely to happen in the future?" Recognizing the role that both objective and subjective forms of information play in the medical process means that all medical interviews are "bi-focal": they must elicit and manage information from these two complementary—but unique—frames of reference.

Identifying the objective and subjective components of patient information is, however, the end-stage result of an effective listening technique. Patients don't present themselves first and their complaints second. Nor do they present only facts and figures, no matter how vague, about their bodies, and then launch into a discourse about their feelings. Rather, they "tell stories" about themselves, as persons who are suffering with a disease, concerned about a new and unfamiliar bodily event, in need of advice on how to enhance or preserve their health, or in need of physician services for some reason that is not related to their immediate medical needs (e.g., insurance, work, or school physicals).

The Primal Story

The burden that any storyteller must assume involves identifying what the audience wants to hear and mixing that in with the story the teller feels he or she truly needs to tell. The communication event is always some compromise between the story that the teller wants to tell and what the teller believes any listener wants to hear. This means that when patients start telling their stories, they must choose a vocabulary that is adequate for two tasks—communicating what they believe about their own experience and presenting that experience in an aspect that will hold the listener's (in this case, the physician's) attention. Thus, what the physician/listener hears is already one step removed from the rawest form of the original story. This raw form of the story—what I will call the "primal" story—is the account that a patient would tell him or herself in the absolute privacy of consciousness.

When told in the privacy of the patient's own consciousness, the primal story is unadorned with extraneous associations, such as those drawn from the past, where other stories about illness and disease were told to other doctors. It flows uninterrupted by the need to respond to the questions that physicians—or anyone else—might use to probe and to focus the telling into specific points. It is full of the patient's own associations drawing disparate symptoms of disease into meaningful relationship with all other aspects of the patient's life. The telling is animated with the patient's own fears, anxieties, and needs. The telling is further structured by the patient's own defense mechanisms, as these restrict and focus how deeply the patient will be able to explore intensely held feelings.

The tone of the story oscillates as the patient moves successively through the domains of despair and hope, anger and acceptance. Foundational aspects of philosophy or religious beliefs are used to help place the events of the story into some pattern inclusive of the whole of one's life. And there are times when the overwhelming events of the story may pose a challenge to the very substance of one's basic beliefs, forcing the storyteller to undergo yet another level of change.

It is clear that this primal story is the seedbed of all the information that the physician/listener will eventually receive from the patient's history. For that, it should be much valued and carefully heard. All would agree that accurate, objective information about a patient is necessary to answer medicine's important questions of diagnosis and prognosis. But is information of the objective type alone sufficient for realizing medicine's objective—to promote healing, well-being, and adaptation to illness that cannot be treated? If the primal story is appreciated only as the source of objective data, then has one really heard all that is there? Is it possible that this primal story also contains potentials of a "non-objective" sort which may be employed in helping the patient to be healed or to adapt more effectively? If so, would not physician/listeners want to hear this part of the story as well, and respond to it?

"It is clear that this primal story is the seedbed of all the information that the physician/listener will eventually receive from the patient's history. For that, it should be much valued and carefully heard."

The contents of the primal story are not only the sources of information that enable physicians to understand what is occurring in the patient's body, but the secret passageways into the patient's subjectivity as well. In the primal story we meet the patient as he or she is with no pretense and no social patina. The existential self—the self struggling with its riddle of existence, responding to the facts of one's world, one's symptoms, one's history and one's destiny. And, since we are all embodied beings, the primal story is the major carrier of the meanings that control the interaction of the self and the body.

The stories told at this level are one's personal "health myths." The strength of the mythic form lies in the fact that in it all of human reality is held together in its essential wholeness. The overriding goal of mythical consciousness is to promote healing at all the levels of human existence, from the organic to the spiritual. Focusing on the mythic potential within the primal story releases energies intrinsic to human nature that can help to override the disintegrating effect of disease.

Listening to the Story

How can the listening of physicians interact with this mythic level? First, we must recognize that the burden of the physician/listener is to help the patient/storyteller relate as much of the primal story as can be recovered in the context of a healthcare interview, while focusing the listening in such a way that the physician can use the contents of the story for the storyteller's own advantage. A physician/listener, however, is not a casual listener. He or she has in mind the questions of medicine and the desire to assist the patient/storyteller to achieve a higher level of health, wholeness, and well-being; or minimally, to keep the patient functioning at the current level, if no further healing is possible. The physician/listener is, then, an agent of change or a preserver of the patient's status quo. Thus, what the physician does becomes an ongoing part of the patient's story. Herein lies the foundation of all medical ethics.

More often the physician/listener has been trained to respond in ways that use physical means to effect beneficial

changes in the patient's body. This training (medical education as we know it) inevitably imposes a certain way of listening to the primal story and supports certain types of questions that physicians use to give directions to the statements patients make. Through the events known as "taking a history," and "the physical," plus laboratory tests, symptoms are removed from their original location in the primal story, disconnected from all their associations in the patient's world, and "re-located" in objective (bodily) space and/or in those processes that fit anatomical and physiological models. "Explaining" the symptoms becomes the goal of diagnosis; and diagnosis becomes the foundation of prognosis.

When physicians recount a patient's story to one another—as residents will do for a precepting attending—or when the story is entered into the chart in the form of "notes," the primal story now becomes re-told in a highly foreshortened way based on categories such as Age, Race, Sex, Chief Complaint, Past Medical History. These traditional categories enable the physician to manage the objective information identified from the primal story by ordering it in established ways. Elements of the history and physical are routed into the appropriate sections which support medical reasoning about the patient's problem. What formerly existed in a story has now become a database populated with bits of facts. One unfortunate consequence of this transformation of narrative into factual information is that the patient's original story could never be reconstructed from this database.

Now the problem here is not that information organized in this way is in error; it's just that the original setting of this information — the way it was interconnected within the patient's perceptions — has been lost in this listening and retelling. All individualized and uniquely person-centered references have been carefully filtered out by the way the physician/listener has heard and remembered, leaving only those distillations of data that can be entered into a treatment algorithm. The major question that this listening process poses to me, then, is this: "Is what has been lost relevant to the physician's task, to medical reasoning or to some other aspect of the physician's responsibility to the patient?" Or, on the other hand, "Does this listening result in a transformation of patient 'raw material' into the only medically useful product?"

Primal Listening and Primary Care

Perhaps the answer depends on how one sees the physician's role. For a primary care physician, a comprehensive definition of role will surely imply a broader band of listening skills and a significantly greater interest in the primal level of the patient's story. The following definition of primary care encompasses the kind of listening I have in mind:

> Primary care is coordinated, comprehensive, and personal care, available on both a first contact and continuous basis. It incorporates several tasks: medical diagnosis and treatment, psychological assessment and management, personal support, communication of information about illness, prevention, and health maintenance.[1]

In my opinion, a prerequisite for fulfilling this definition of primary care is the physician/listener's ability to hear the primal level of the patient's story and to use its dynamic in the process of healing. Primary care implies a primal listening. But to what dynamic am I referring?

1 Patient associations. Disease is experienced by patients as a "dis-ease." Some perceived bodily event is separating them from their normal engagement with the agenda of their lives. In the primal story you will hear how the disease is forcing change on the patient's basic life structure, forcing the patient to come to terms with an experience not of his or her own desire or choosing, an alien element that has no accepted place in the intended fabric of one's life.

The reality of disease means adaptation—change. How is the patient coping with the reality of the disease? What effect does the disease and the treatment have on the patient's relationships? Does the onset of an acute process or the continuation of a chronic disease force changes in the patient's support network, in job responsibilities? Listening for the primal level of the story teaches us about the cybernetic nature of the world of the sick—disease affects all of the self, implying that the changes one undergoes in these dimensions may have effects on the processes at work at the organic level as well.

2 Patient fears. The understandings that patients create about diseases are often a blend of emotional reactions and medical misinformation. Sometimes patients have developed a self-diagnosis of their symptoms that is in error, but is nevertheless terrifying to them. On other occasions, the patient's understanding of the disease will under or over-estimate its severity. In the primal story you will find what the patient believes about the disease and also the degree of threat to his or her well-being that the patient perceives. Bringing the patient to a realistic apprehension of his or her true medical state involves listening to the kinds of fears and health knowledge and beliefs that exist in the level of the primal story. This information is essential in helping the patient adapt effectively to the reality of the disease and its effect on his or her life.

3 Defense mechanisms. No one likes to look at harsh realities straight on. Denial serves to diminish the impact of the truth and to allow one to examine it in as great detail as one is able. The role that denial plays in a patient's coping style may be heard in the primal story. Often the voice of denial is the silence of what is *not* said—is not talked about,

appearing in what the patient does not want to discuss, in how the patient tries to change the subject. Supporting the patient in talking about what he or she is choosing to neglect to think about strengthens the patient's ability to face reality.

4 Basic religious and philosophical stance. How does the patient relate being ill to his or her understanding of the constituent elements of the larger world of which the patient is a part? Is illness conceived to be a form of divine punishment, or just bad luck? Does the patient see him or herself as a passive object of the disease process, or as an agent capable of performing an active role, establishing a partnership with the physician in getting well? What else has happened to the patient that has required employment of basic religious and philosophical ideas to give meaning to difficult experiences? All of this is in the primal story. The physician who listens at this level may be able to provide guidance to a patient at the deepest levels of spiritual response.

It is my belief that the physician/listener who actively searches for elements of the primal story and practices listening to the associations, fears, defense mechanisms, and the ways in which patients try to find meaning in their illness, will be better able to "reach to a patient's complaining," not only at its organic levels, but at its personal, existential ones as well. Reaching to the patient's complaining and responding with the correct medical diagnosis as well as the proper forms of supportive counselling will enable a patient to mobilize much more effectively all of his or her inner resources in coping with a disease. The physician who listens for and responds to the primal story is involved in strengthening the patient in ways that no prescription or course of antibiotic therapy ever can. ❑

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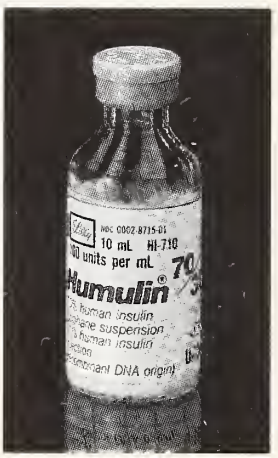


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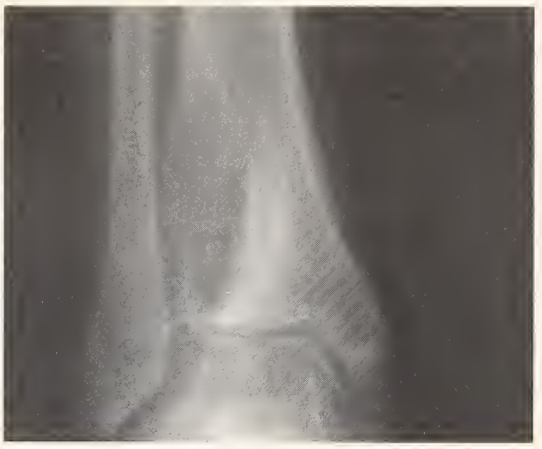
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Ewing's Sarcoma



A typical radiograph from a 23-year-old man with Ewing's sarcoma of the right distal tibia. It shows the characteristic appearance of "moth eaten" bone destruction.

James Ewing, M.D., first described the bone cancer that bears his name in 1921. He initially characterized it as an endothelioma or endothelial myeloma of bone distinguished by its clinical picture: a teenager with pain, frequently accompanied by fever, due to tumor involving the midshaft of the long bones. These tumors have a characteristic histologic appearance of highly vascular sheets of small round cells and are quite sensitive to radium. Today this tumor, known as Ewing's sarcoma, is the second most common pediatric bone cancer after osteogenic sarcoma, and is curable in more than 50% of cases with combined chemotherapy and irradiation.

James Ewing (1866-1943) was a leading authority on the diagnosis and management of cancer. His landmark textbook *Neoplastic Diseases*, published in 1919 after two years of exhaustive research, gave the definitive word on cancer during his day. Not only a remarkable scholar (a 1931 bibliography notes 160 articles and textbooks - long before the advent of word processors!), Dr. Ewing was revered as a teacher at Cornell Medical School, where he constantly emphasized the clinical, experimental and therapeutic aspects of the cancer problem. His career is intertwined with the early development of what is now known as the Memorial Sloan-Kettering Cancer Center, where Ewing served as president of the medical board, director of cancer research, and later director of the hospital.

Ewing was born in Pittsburgh and graduated from Amherst College with both bachelor's and master of arts degrees and a lifelong affection for philosophy. He attended medical school at Columbia, but during his internship at Roosevelt Hospital Ewing developed his interest in laboratory medicine under the guidance of Dr. T.M. Prudden, in whose pathology laboratory Ewing later served. The young Dr. Ewing had a brief and apparently unprofitable flirtation with medical practice. One obituary noted that in back of his Manhattan office he had a tennis court, transforming the premises into "something more suggestive of a locker room in a country club than a place for the practice of a learned profession." Throughout his years of intense professional activity, tennis remained one of few avocations. In 1899, after a pathology apprenticeship at Columbia as a Tutor, Fellow, and Instructor, Ewing (remarkably young at 33), became Professor and first Chairman in Pathology at the newly reorganized Cornell Medical School. He held that post for more than three decades.

James Ewing's personal life was marked by significant tragedy, perhaps explaining his penchant for ceaseless work. Several years after his marriage in 1900, his wife died of toxemia of pregnancy. Ewing withdrew from most social contacts and entered a period of near total devotion to his laboratory work and teaching. Medical problems also plagued Ewing. In college he developed osteomyelitis of the femur that left him with a pronounced limp for the remainder of his life. Later, he suffered from intractable paroxysms of trigeminal neuralgia, and he eventually submitted to operation by Harvey Cushing in 1926. His major scholarly accomplishment, *Neoplastic Diseases*, was written during remissions of this affliction.

There has been much debate (at times acrimonious) over the cell of origin in Ewing's sarcoma. Despite Ewing's contention of an endothelial origin, recent data suggest derivation from primitive neuroepithelial tissue. Ewing's sarcoma of bone displays a characteristic chromosomal translocation, t(11,22), identical to that seen with peripheral neuroepithelioma. On the other hand, immunocytochemistry of Ewing's sarcoma specimens is inconclusive. Today, the diagnosis of Ewing's sarcoma is one of exclusion after ruling out other "small, blue cell tumors" of childhood, such as rhabdomyosarcoma, lymphoma, neuroblastoma, or neuroepithelioma.

One of the premiere authorities on cancer throughout his professional life, Ewing did much to establish the reputation of the Memorial Hospital. In 1913, the hospital affiliated with Cornell and Ewing was made President of the Medical Board. About this time, Ewing began his association and friendship with James Douglas, mining executive, president of the Phelps Dodge Corporation and philanthropist. Douglas secured considerable funds as well as pitchblende from which to make radium for donation to the Memorial Hospital. With these resources and Ewing's leadership, cancer research and particularly the clinical use of radium was much advanced. Ewing served as Director of the Memorial Hospital from 1932 until his retirement in 1939. ❑

Kenneth B. Roberts, M.D., Department of Radiation Oncology, Duke University Medical Center

Aphorisms of the Month

Edited by Daniel Sexton, M.D.

Wisdom

The essence of wisdom is the ability to make the right decision on the basis of inadequate evidence.

—Alan Gregg

It is that which we do know which is the great hindrance to our learning that which we do not know.

—Claude Bernard

Vision is the art of seeing the invisible.

—Jonathan Swift

A good scare is worth more to a man than good advice.

—Ed Howe

Appearances to the mind are of four kinds. Things either are what they appear to be; or neither are, and do not appear to be; or they are and do not appear to be; or they are not, yet appear to be. Rightly to aim in all these cases is the wise man's task.

—Epictetus

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Health Watch

VOLUME 52 / NUMBER 7 / JULY 1991

Nutrition

NUTRITION AND WOMEN

From the day a young woman has her first menstrual period to the day she dies her dietary needs are different from those of boys and men. Meeting those nutritional needs is not especially difficult, but being aware of them and making a serious attempt to accommodate them are both important parts of an essential process.

Basic nutrition = good sense

No matter your age or stage in life, there is a truism about everyone's weight that bears remembering: *calories in* have to equal *calories out* in order for your weight to remain steady. To increase your weight, take in more calories than you use up. To reduce your weight, use up more calories than you consume.

With that in mind, remember those four basic food groups Mrs. Thistlebottom told you about in grade school science class? They're still around, they're still the same and they're still useful. Fruits and vegetables are the first group and the average woman needs at least two servings of fruits and three of vegetables every day. Breads, cereals, rice and pasta are the second group, and six servings daily is the minimum. Milk, yogurt and cheese constitute the third group, two to three servings of which are required daily. The fourth group comprises meats, poultry, fish, dry beans and peas, eggs and nuts and you should have two or three servings of them each day.

Another way to look at food, which is getting easier all the time, is to consider it part protein, part carbohydrate and part fat. Labels are a great help with this kind of analysis. You



North Carolina Medical Society, PO Box 27167, Raleigh, NC 27611.

can tell by reading labels how much of what you eat is protein, how much is carbohydrate and how much is fat. Fat should make up no more than 30 percent of your daily calories, protein another 30 percent of your calories and carbohydrates the remaining 40 percent. Some experts say lower the fat content even more, i.e., 20 percent.

The way to figure out the calories of protein you've eaten is to multiply the number of grams of protein in one serving (it's on the label of most foods) by 4. Carbohydrates have precisely the same number of calories per gram: 4. Then there's fat. Fat has 9 calories per gram instead of 4. Two tablespoons of peanut butter derive nearly 75 percent of their calories from fat (16 grams x 9 calories per gram = 144 calories of fat) while only 24 calories come from carbohydrate (6 g x 4) and 36 calories from protein (9 g x 4).

The most interesting fact you should have gleaned from that information about proteins, carbohydrates and fats is the possibility of eating twice as many grams of protein and carbohydrate as fat for the same number of calories. To lose weight, then, cut fat first since it has so many more calories. Don't eliminate the baked potato (a good source of mostly carbohydrate) but do limit or eliminate the butter (all fat).

Even if your weight is at or close to the ideal for your height (see table on next page), try keeping a diary of your food intake for several days just to see if you regularly eat foods from all four groups. Then figure out the composition of those calories: how much protein, carbohydrate and fat. With **everything** you eat written down to examine at leisure, you may find out some interesting facts about yourself. Some people feel bloated when they eat red meat; others feel wonderful on a diet high in carbohydrates. Serious runners, including marathoners, often fill up on pasta and other carbohydrates the day before a race. Keeping a food diary may tell you some things you didn't suspect about yourself and point out some changes you could easily make to improve your eating profile.

Now that you've been reminded of the basics about eating right as a growing woman, let's examine several special times of your life when those dietary needs will differ somewhat.

Basic 4 Food Guide

No one food gives you all of the necessary nutrients in the amounts you need. Therefore, choose a variety of foods each day from the "Basic 4" to get the nutrients you need. Use this table as a daily guide when shopping, planning and preparing meals.

Breads & Cereals

1 serving = 3/4 cup dry cereal
= 1/2 cup rice, hot cereal, noodles, macaroni
= 1 slice bread, square corn bread, biscuit

Fruits & Vegetables

1 serving = 1/2 cup juice
= 1 medium piece of fruit
= 1 cup raw vegetable
= 1/2 cup cooked or canned vegetable or fruit

Milk & Milk Products

1 serving = 1 cup milk, plain yogurt
= 1 1/2 slices or ounces cheese
= 2 cups cottage cheese

Meat & Other Protein Foods

1 serving = 1 cup cooked dried peas or beans
= 2 eggs
= 4 tablespoons peanut butter
= 2 ounces poultry, fish or meat

Limit eating other foods like fats, sweets and alcoholic drinks. These foods have few nutrients but are high in calories.

Adolescence

The typical girl is between 11 and 15 years old when she begins to menstruate. The pre-teen and teenage years are already pretty stressful on a young body with activity levels that can plummet from being always-on-the-go (sports plus school plus after-school activities, etc.) to becoming a couch potato (watching MTV, watching sports, watching boys) in just a few months. Add to this the sudden onset of menarche and that adolescent girl is at a point in her life where she needs to pay attention to what, how much and why she eats.

Menstruation can cause a lack of iron or even anemia, especially if your periods are heavy. To guard against anemia, which will make you feel tired and washed out, eat foods high in iron (red meats, liver, enriched breads and cereals) and foods high in vitamin C (oranges, grapefruit, fruit juices, potatoes, tomatoes, cantaloupe, strawberries). The vitamin C helps you absorb the iron.

You need more protein as an adolescent than you will at any other time of life except when you are pregnant or nursing. Your calcium needs jump, too, from about 800 mg per day at age 10 to 1200 mg per day between 11 and 19. You can find that extra calcium in yogurt, milk, cheese, broccoli, canned salmon or sardines. There are about 300 mg of calcium in one cup of milk.

Teenagers are at real risk of weight gain as they adopt new interests and drop former ones, usually resulting in a decrease in calories used or an excess of calories consumed. Teenagers as a whole also eat more fat and salt than they need for a healthy diet.

In summary, for teenagers: increase protein, increase calcium, balance calories in with calories out, watch fat and salt intake. Exercise. Enjoy.

Pregnancy

You might pay a bit more attention to what you eat and drink during pregnancy if you consider that all of the raw material that goes into your baby's development during those nine months comes from your bloodstream. Protein is necessary for the formation of heart, lungs and brain; minerals are important for the development of bones and teeth; and so on. Pregnancy therefore requires some special attention to diet but the key, as always, is to match caloric needs with caloric intake.

It's not a bad idea to prepare a food diary when you are early in your pregnancy so that you will know just what you do eat in the course of four or five days. You can easily analyze your intake by checking labels and seeing whether you regularly eat a variety of foods from each of the food groups and what proportion you eat of protein, carbohydrate and fat. Your physician might recommend a multi-vitamin to take daily during your pregnancy to assure that you get enough of the vitamins and minerals needed for solid growth of the baby, but otherwise you can mostly continue a normal, varied diet.

Perhaps the biggest concerns about nutrition during pregnancy are those controversial items that receive a lot of attention anyway: alcohol, caffeine and cigarettes. Most doctors recommend that women drink no alcohol during pregnancy. Most doctors recommend that women smoke no tobacco during pregnancy (or any other time, for that matter). Caffeine doesn't yet seem to elicit the same strong reaction from the medical profession as drinking alcohol and smoking tobacco do, but it is a stimulant that crosses the placenta and circulates in the baby's bloodstream; many doctors therefore recommend that women limit their consumption of coffee and other foods with caffeine (colas and chocolate, for instance) during pregnancy.

Pregnancy is a good time to begin a walking program if you haven't done that already. Walking a mile or more every day during pregnancy will make you feel better, will strengthen your leg muscles, improve your lung capacity and prepare you for chasing after a small child for the next ten years. Labor and delivery are usually easier on a fit body, too.

Nursing

If you choose to breast feed your baby, you'll need to continue eating foods rich in protein, calcium and iron during lactation just as you did during pregnancy. Extra vitamin C will again help you metabolize the extra iron you eat. The breast-dependent baby is still getting all its needed nutrients from your body and you need to be sure you have an ample supply for yourself as well.

Menopause and after

Some women approach the end of their menstrual life with dread and others with delight. Whatever your emotional reaction to this new stage, you must be prepared to meet yet another round of nutritional changes your body requires for continuing good health.

Menopause simply means that your body stops its monthly menstrual cycle, but the process it goes through and some of the resistance it puts up against that process is anything but

HEIGHT		WEIGHT (pounds)		
Feet	Inches	Small Frame	Medium Frame	Large Frame
4	9	98-108	106-118	115-128
4	10	100-110	108-120	117-131
4	11	101-112	110-123	119-134
5	0	103-115	112-126	122-137
5	1	105-118	115-129	125-140
5	2	108-121	118-132	128-144
5	3	111-124	121-135	131-148
5	4	114-127	124-138	134-152
5	5	117-130	127-141	137-156
5	6	120-133	130-144	140-160
5	7	123-136	133-147	143-164
5	8	126-139	136-150	146-167
5	9	129-142	139-153	149-170
5	10	132-145	142-156	152-173
5	11	135-148	145-159	155-176

simple. Different women have different symptoms (or none) of menopause, and they can include the ubiquitous hot flashes (mostly at night, but sometimes during the day as well), periods that become markedly abnormal as to spacing, length and intensity, mood swings and fluid retention.

The biggest dietary concern for the menopausal woman is calcium because of her susceptibility to osteoporosis or brittle bones. Osteoporosis happens to one woman in four, so it makes sense to assume that you are at risk and to change your diet to protect your vertebrae. Increase your intake of calcium (in milk products, oysters, leafy green vegetables, broccoli), talk with your doctor about estrogen replacement therapy and get some regular exercise.

Estrogen is a hormone that kicked in when you first began having menstrual periods, played an essential role in reproductive function during your childbearing years and began to decrease its output when you were around 45 or 50. As your estrogen production declined, your periods stopped and you may have had some of the other menopausal symptoms mentioned earlier. Estrogen seems to protect women from heart disease, too, since the risk of heart attack increases dramatically once women have gone through menopause.

Most women can take estrogen replacement prescribed by their physician. It will help continue the heart protective effects of estrogen, stave off osteoporosis and relieve the symptoms of menopause. Talk with your doctor about whether or not you are a candidate for replacement estrogen. During your discussion, also ask about alcohol, cigarettes and caffeine. All three increase bone loss, putting you at even greater risk of having osteoporosis, and asking the question will give your doctor one more opportunity to advise you to stop smoking and limit your intake of both alcohol and caffeine.

Exercise is easily as important as calcium and estrogen. Exercise strengthens bones while doing a number of other good things for you as well: it helps keep your weight steady if your diet remains the same; it helps reduce stress; it helps control blood pressure; it raises the good cholesterol level (HDL) in your blood. Walking and swimming are two good ways of getting exercise that won't put undue stress on your bones and joints.

Summary

Balance and moderation are two good words to remember about nutrition through all phases of womanhood. By eating regularly from each of the four basic food groups, varying food intake to match your level of activity and moderating your consumption of food and drink that is considered less than good for you (fat, salt, alcohol) you should be able to maintain a satisfactory weight level and, equally importantly, feel well. ❑

1991

August: .....*Nutrition and Men*

September: .....*Nutrition and Children*

October, November, December:.....*Medicare*

Lung Transplantation at UNC

The First Year

Thomas M. Egan, M.D., M.Sc., Jan Westerman, M.D., Michael R. Mill, M.D., and Benson R. Wilcox, M.D.

During the past year, a program of isolated lung transplantation was initiated at the University of North Carolina at Chapel Hill. The anniversary of the first lung transplant performed at this institution affords an opportunity to review the results of this program. In this article, we will detail the number and types of referrals to our program, report the clinical results achieved, and speculate on the future of isolated lung transplantation.

The first attempt at isolated lung transplantation was undertaken by Dr. James Hardy at the University of Mississippi in 1963.[1] Although this attempt documented the feasibility of lung transplantation in man, the patient succumbed after 18 days because of renal and pulmonary failure. Over the ensuing 20 years, success eluded lung transplant efforts, in part because of difficulties with immunosuppression and in part because of failure of bronchial anastomotic healing.[2] Prior to 1983, there were 38 attempts to perform isolated lung transplantation reported worldwide, and all attempts resulted in failure.[2]

From the Departments of Surgery and Medicine, The University of North Carolina School of Medicine, Chapel Hill 27599-7065.

The introduction of the new immunosuppressive agent cyclosporine in the early 1980s was responsible for significant improvements in survival in renal, cardiac, and liver transplantation.[3] The thoracic surgical group at the University of Toronto completed seminal laboratory investigations that conclusively documented the adverse effects of high dose steroids on bronchial anastomotic healing.[4] They also demonstrated that bronchial omentopexy could achieve significant vascularization of the ischemic donor airway.[5,6] This surgical technique, coupled with the use of cyclosporine and azathioprine (Imuran) as primary immunosuppressive agents, led to the first demonstration of consistent long term survival in animals undergoing single lung transplant.[7]

The principles of early steroid avoidance, cyclosporine therapy, and bronchial omentopexy were first applied in human lung transplantation at the University of Toronto in 1982. A young man underwent sequential lung transplantation for end stage lung disease related to paraquat poisoning.[8] Although the lung transplants were technically successful, the patient succumbed ultimately from complications related to paraquat myopathy. At the time of death, lung function was excellent, with no evidence of rejection, and bronchial anastomotic healing was demonstrated. Using these same principles, the first successful single lung transplant was performed at the University of Toronto, in 1983 in a patient with idiopathic pulmonary fibrosis.[9] Since then, the transplant group at Toronto has firmly established the success of isolated lung transplantation for this disorder.[10]

After developing the technique of double lung transplantation in the laboratory setting,[11] the group at Toronto performed the first successful double lung transplant in 1986.[12] This led to the successful application of double lung transplant for chronic obstructive pulmonary disease (COPD).[13] Although the initial success with this procedure was encouraging, there was a substantial incidence of airway complications related to the length of ischemic donor airway when using a tracheal anastomosis.[14] The technique of double lung transplant has evolved to address this complication. Noirclerc, in Marseille, was the first to describe a bilateral bronchial anastomotic technique for double lung transplant in an effort to reduce the amount of ischemic donor airway at risk.[15] More recently, the procedure was modified to allow for the sequential transplantation of two lungs through an anterior bilateral thoracotomy.[16] This approach has reduced the need for cardiopulmonary bypass (CPB). It has also resulted in a substantial reduction in the morbidity of double lung transplantation by eliminating the adverse effects of CPB on perioperative blood

loss and minimizing the length of donor bronchus at risk for ischemic complications. With this approach, patients with chronic inflammatory diseases and associated mediastinal, pleural, and bronchial vascular collaterals are at less risk for life-threatening hemorrhage.

Patients and Methods

Our program began to receive referrals for lung transplantation in the fall of 1989, and our first lung transplant was performed in late January, 1990. At the time of this report, 75 patients have been referred to the program. The outcome of these referrals is depicted in figure 1. Twelve patients were declined on the basis of age or medical contraindications to lung transplant, or they refused further workup after telephone contact. Three patients died before they could be seen as potential candidates, and 11 referrals are scheduled to be seen in the near future. Forty-nine patients have been seen, with 26 patients undergoing an extensive evaluation to determine candidacy for lung transplantation. Three patients died prior to the completion of evaluation, and two others died after being accepted for transplantation. Of the evaluated patients 12 have been transplanted and five are currently waiting. Twenty-two patients are being followed at various stages of the evaluation process. A number of patients are not yet ill enough to be subjected to the risks of transplantation.

The distribution of diagnoses of patients referred for transplantation is depicted in figure 2. The largest group consists of patients with COPD, including three with alpha-1 antitrypsin deficiency. We have had 18 patients referred with cystic fibrosis, which reflects the ongoing interest of our institution in this disease process, as well as recent improvements in surgical technique that make isolated lung transplantation safer for these individuals. Patients with idiopathic pulmonary fibrosis continue to constitute a large group of candidates for lung transplantation. Recently, we and others have entertained single lung transplantation for primary pulmonary hypertension and for Eisenmenger's complex with concomitant repair of associated congenital heart defects.[17] Accordingly, we have seen five patients with pulmonary hypertension. One of these patients, who was a candidate for heart-lung transplantation, died prior to completion of her evaluation.

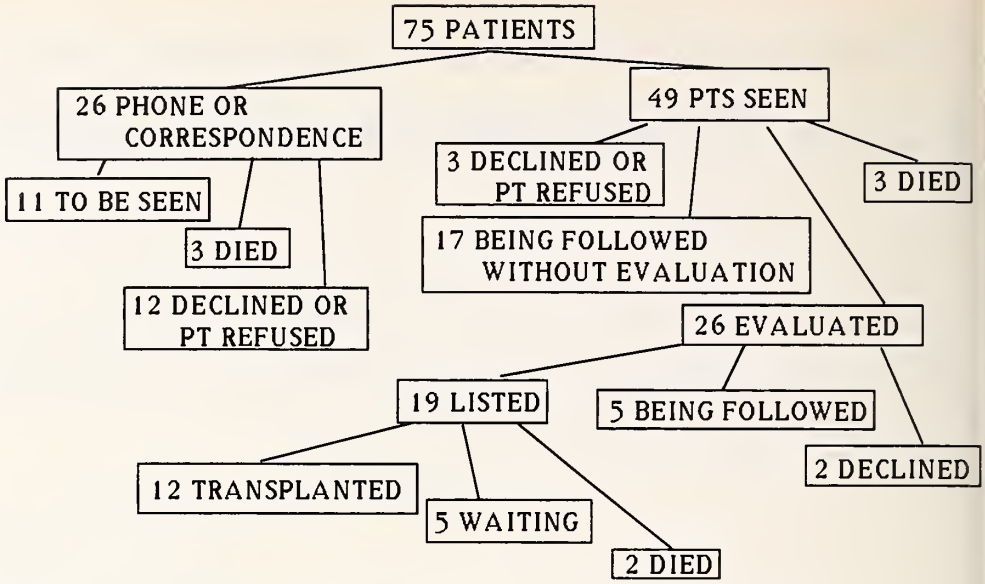


Figure 1. Outcome of referrals to the UNC lung transplantation program, January 1990 to January 1991.

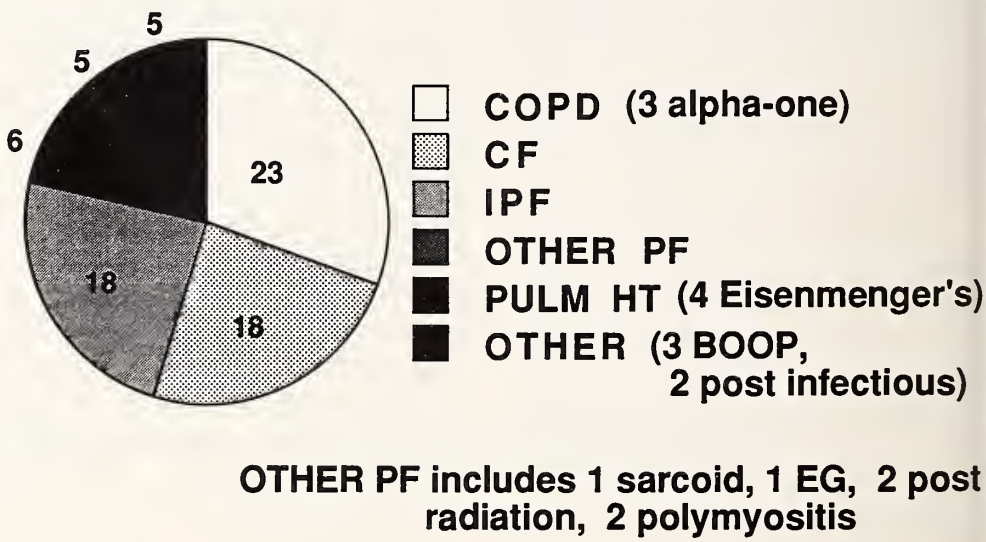


Figure 2. Distribution of diagnoses of patients referred to the UNC lung transplantation program, January 1990 to January 1991.

Clinical Results

Our program has performed 13 isolated lung transplants in 12 patients. There have been five single lung transplants and seven double lung transplants, with one re-do double lung transplant. The distribution of diagnoses for lung recipi-

ents is depicted in figure 3. Four patients with cystic fibrosis have undergone double lung transplant using the bilateral technique first described by Pasque et al.[16] Although single lung transplant is recognized as being efficacious for COPD,[18,19] we performed a double lung transplant for this disorder in a patient with a history of recurrent pulmonary infections. Pathology confirmed the presence of small areas of cystic bronchiectasis in the explanted lungs. One 24-year-old male underwent double lung transplant for end stage lung disease for presumed allergic bronchopulmonary aspergillosis. After bilateral lung extraction, the pathologic diagnosis remained elusive. Large areas of scar tissue were separated by islands of relatively normal-appearing lung tissue. A 20-year-old male underwent double lung transplant after his lungs were destroyed by Legionella pneumonia. He was ventilated on 100% oxygen for four months prior to his successful double lung transplant.

The five patients who underwent single lung transplant included a young woman with end stage eosinophilic granulomatosis involving the lung,[20] three patients with idiopathic pulmonary fibrosis, and one patient with pulmonary fibrosis secondary to bleomycin and radiation for cured Hodgkin's disease.

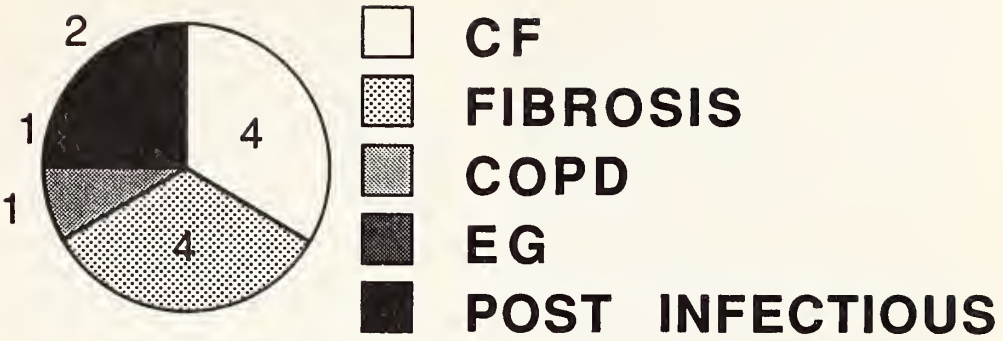


Figure 3. Distribution of diagnoses for lung recipients at the UNC lung transplantation program, January 1990 to January 1991.

Surgical Techniques

The technique for single lung transplant has been detailed elsewhere.[21] A quantitative lung perfusion scan is used to identify the lung contributing the least to meaningful gas exchange. In general, the worst lung is removed and that side is transplanted, unless there is an anatomic advantage to transplanting one particular side. The theoretical advantages of right lung transplant are the ease with which one can provide cardiopulmonary bypass in the chest and the larger vascular surface area of the right lung. This is felt to be advantageous for patients with pulmonary hypertension, and many congenital cardiac defects that result in Eisenmenger's syndrome can be repaired through a right thoracotomy.

A recipient pneumonectomy is performed through the bed of the resected fifth rib. The allotransplant is performed using standard techniques, and we have routinely employed omentopexy in an effort to reduce airway complications.

All double lung transplants have been performed using the methods described by Pasque et al,[16] through an anterior bilateral thoracotomy approach, coming across the sternum. This provides excellent access to both pleural spaces, allowing the safe mobilization of both lungs even if there is considerable pleural scarring, which is common in infective end stage lung disease. This also provides ready access to the pericardial contents for institution of cardiopulmonary bypass, should it be required. Three of eight double lung transplants have required cardiopulmonary bypass because one-lung anesthesia was not satisfactorily tolerated. The institution of bypass after performing the dissection of the recipient lungs results in a substantial reduction in blood loss.

Immunosuppression Protocol

The immunosuppression that we currently employ consists of cyclosporine, azathioprine, and prednisone. Steroids are routinely withheld for the first three weeks following transplantation because of the deleterious effects of steroids on wound healing.[4] Our practice has been to administer anti-lymphoblast globulin, prepared at the University of Minnesota, for 14 days following transplantation.[2] We perform bronchoscopy and transbronchial biopsy one week, three weeks, and three months following transplantation, and whenever there is a suspicion of rejection or infection.

Transbronchial biopsy has limitations, and we have seen instances where rejection was suspected on clinical grounds but not clearly demonstrated on biopsy. Nevertheless, objective improvement in lung function after a bolus dose of steroids confirms the diagnosis of rejection.

On several occasions, cytomegalovirus (CMV) pneumonitis has been diagnosed by transbronchial biopsy. The early institution of ganciclovir based on the presence of a CMV pneumonitis has resulted in excellent clinical response. Surveillance bronchoscopies and transbronchial biopsies are performed every three months for the first year.

Morbidity and Mortality

Ten of the 12 patients remain alive, with the longest survivor now nine months post operative. The two deaths were related to poor graft function, one hampered by an early staphylococcal pneumonia, and one due to massive aspiration following self-extubation.

One patient with cystic fibrosis required repeat double lung transplant at one week after catastrophic deterioration of lung function, subsequently demonstrated to be related to venous thrombosis of the left lung. After retransplant, the patient had a protracted ICU course including hemodialysis for acute tubular necrosis. He has since recovered and has been discharged.

Aside from the two deaths, there have been two other cases of prolonged postoperative ventilation. One was anticipated beforehand because of the extent of debilitation prior to transplantation, and one was related to dystonia secondary to administration of low doses of haloperidol.[22] Eight patients have developed evidence of CMV pneumonitis. All of these patients were serologically CMV positive prior to their transplant. Aside from the presence of fever, CMV has not produced major symptoms and has been easily controlled with short courses of ganciclovir.

Eighteen airway anastomoses have been followed for a sufficient period of time to recognize major complications. One patient has a contained airway dehiscence. This occurred in the patient who underwent a re-do double lung transplant. His right airway anastomosis has separated at the cartilaginous portion of the airway, but the omentopexy has prevented communication with the mediastinum or pleural space, and the airway is healing by secondary intention. It is possible that the patient will ultimately develop a stricture at this site. This problem, should it arise, could be managed successfully with dilatation and placement of an intrabronchial stent.[23,24]

Discussion

Lung transplantation offers an effective therapeutic alternative for patients with a variety of end stage lung diseases. Success results in improvement in both the quality and quantity of life for appropriately selected patients. According to the lung transplant registry maintained at Washington University, more than 430 isolated lung transplants have been performed worldwide since 1983, with a crude survival of 70%.[25] In 1989, according to the United Network for Organ Sharing (UNOS), 89 isolated lung transplants (single lung, double lung, or both) were performed, compared with 70 heart-lung transplants.[26] The growth in lung transplantation has been exponential since 1983, reflecting the successful use of the procedure by the profession and enthusiasm for this form of therapy for patients with end stage lung disease.

"...more than 430 isolated lung transplants have been performed worldwide since 1983, with a crude survival of 70%.... Currently, the limiting factor to widespread application of this technology is the number of suitable donors."

Currently, the limiting factor to widespread application of this technology is the number of suitable donors. UNOS statistics showed little increase in the number of organ donors between 1988 and 1989. In both years, almost 1,700 heart transplants were performed annually. Because of airway contamination, aspiration, chest trauma, and neurogenic pulmonary edema, many of these cardiac transplant donors do not have lungs that are suitable for transplantation. In fact, in a recent survey of organ procurement organizations, it was estimated that perhaps as few as 25% of cardiac donors may have lungs suitable for transplantation.[27] However, increased awareness on the part of the public and on the part of organ procurement agencies may increase the number of lung donors. Unfortunately, it is likely that demand for lungs will exceed supply in the near future.

Current Indications for Lung Transplantation

We currently offer isolated lung transplantation to patients with progressive end stage lung disease with an estimated life expectancy of 18 to 24 months. There must be absence of other systemic diseases, and the patients must demonstrate the ability to comply with a complex follow-up regimen. Psychological stability is extremely important because of the stresses such a major endeavor imposes upon recipients. Our current upper age limit is 65, and we are increasingly circumspect about offering these procedures to patients over the age of 60 because of the likelihood of concomitant health problems and because of the debility that accompanies advancing age in the presence of chronic end stage disease.

Prospective transplant candidates undergo an in-hospital evaluation consisting of three to four days of tests designed to document the degree of lung disease and to exclude the possibility of disease in other organ systems. Evaluation includes a right heart catheterization in all candidates and a left heart catheterization in any patient with any suspicion of coronary disease, or left ventricular dysfunction. An assessment by an experienced physiotherapist is extremely valuable and has often been helpful in determining that some candidates were not yet ill enough to be subjected to the risks of transplantation.

We require that prospective candidates relocate to the Chapel Hill area on a temporary basis prior to listing for transplantation. This affords us the opportunity of close follow-up, as well as enrollment of the patient in a program of pulmonary rehabilitation designed to improve exercise tolerance and to increase the strength of a variety of muscle groups before transplantation. The rehabilitation program is continued on a outpatient basis for a period of one to two months after transplantation and discharge from the hospital. This has been instrumental in returning these chronically debilitated patients to an active lifestyle.

Predicting life expectancy with end stage lung disease is difficult. Progres-

sive deterioration in pulmonary function is an ominous sign in patients with pulmonary fibrosis, as are repeated hospitalizations for exacerbations of cystic fibrosis in the face of severely reduced volumes and flows. The natural history of chronic obstructive lung disease makes it hard to predict longevity accurately, but more frequent hospitalizations, a progressive reduction in levels of activity, and unchecked weight loss are worrisome.

The future of lung transplantation appears promising. Newer, more precise methods to diagnose rejection and newer immunosuppressive agents will allow for more selective modulation of the immune system, reducing the morbidity of current immunosuppressive regimens. Innovative approaches to the problem of donor supply may improve the prospects of offering lung transplantation to larger numbers of patients. ❑

Update

To date (mid-June), 21 patients have undergone isolated lung transplantation (nine single, 12 double), with 19 current survivors.

Acknowledgment

The authors express their sincere appreciation to Betsy Mann for her editorial assistance in the preparation of this manuscript.

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Primary Care: The Unmet National Imperative

James A. Hallock, M.D.

The issue of primary care is receiving tremendous consideration and rhetoric on a national and statewide level. Many proposals to deal with access to and distribution of health care will require primary care physicians to play a major role. Participants in these deliberations include organized medicine and academic medicine, with the resultant plans and proposals receiving widespread publication.

Despite a national imperative for a health care delivery system based on primary care, this call is not being met as young physicians enter the practice of medicine. The Association of American Medical Colleges' (AAMC) annual "Data Book" provides statistical information related to medical education. In its current edition, table B12 (results of graduate questionnaire) reports the percentage of graduates of American medical schools entering primary care and specialty fields. Twelve years ago, 40% of American graduates entered primary care training, as defined nationally to include internal medicine, family medicine, and pediatrics. Ten years later, the class of 1989 had 75% entering specialty training and only 25% entering the three primary care disciplines. The average over 10 years has been 16% in family medicine and 33% in primary care. The recent trend over the past two years is most alarming. This is an issue of national importance which must be evaluated and addressed if we are in any way to influence primary care in the future.

"Despite a national imperative for a health care delivery system based on primary care, this call is not being met as young physicians enter the practice of medicine."

The percentages for the state of North Carolina are similar to the national experience for students entering primary care and family medicine. In North Carolina, the impact of the Area Health Education Centers (AHEC) system on the distribution of primary care physicians has been significant. Further information is available in the March, 1990, report of AHEC, "Medical Education and Medicine Manpower in North Carolina."

The Mission of East Carolina University School of Medicine

East Carolina University, which has as a stated mission the production of primary care and family physicians, has been successful thus far in achieving this mission. Data published recently indicate that since the first class of 1981, 24.9% of graduates have entered family medicine residencies and over 60% have entered primary care. This success is directly related to the stated mission and the institutional commitment as evidenced by resources directed toward primary care and family medicine. The school approaches this positively during the admissions process, within the curriculum, and with student support services. Without an institutional commitment success is unlikely.

This direction is not necessarily a requirement for all medical schools, but must be addressed collectively to achieve a successful primary care system.

All told, however, I believe it is incumbent on the academic medical education hierarchy to address issues within the medical curriculum and to make a commitment to recruiting and retaining students who are dedicated to the practice of primary care.

The AAMC has published the "Report of the Task Force on Physicians Supply," which addresses the issue of supplying physicians for future

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needs. This report suggests a series of conclusions and recommendations concerning unequal and inadequate access to physician services. Recommendation eight states, "The AAMC should advocate the adoption of educational programs and other measures that will encourage graduating physicians to enter primary care practice in greater numbers." This report and the action items associated with it properly acknowledge the role of academic medicine in these issues.

The Danger of Discouraging the Best and the Brightest

Beyond our schools of medicine, many factors influence the decision of students to enter medicine and primary care. All too often, the significant role model is a physician who decries his or her practice and dissuades students from considering a medical career. It is distressing indeed that many students are dissuaded from the practice or encouraged not to practice in a variety of areas by those of us currently in practice. If this trend is allowed to continue, medical schools will not have a pool of the best and the brightest students to choose from and the future of the profession will ultimately be adversely affected.

I believe that we must work diligently to improve our image on a national and local level. Organized medicine can play a significant role, since each one of us is a role model in our communities, influencing the perceptions of all of our young people with regard to the profession of medicine.

Other factors that tend to dissuade entry into primary care include:

1 Our students are being graduated with ever-increasing debt. The opportunity to retire that debt is much greater in high-earning, non-primary care specialties. A critical and serious evaluation must be made of the debt incurred by medical students.

2 The earning potential of primary care physicians is a factor that dissuades students. It is to be hoped that the recognition of this in newer reimbursement formulas will encourage primary care practice.

3 The relative bureaucracy involved with primary care practice and the paperwork therein are marked disincentives to practice.

4 The lifestyle frequently associated with primary care, particularly in rural practice, is often cited by students as a negative influence in their decision making.

The need for more young people to enter the profession of Medicine as primary care physicians is a multi-faceted issue which can be addressed by every physician, by organized medicine, and by academic medicine. If all of the elements work together in a coordinated fashion, I believe the situation will be improved along with the health care of our patients. ❑

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Working Together: PA/MD Bonding

A Duet, Not A Duel

Robert L. Bloomfield, M.D., F.A.C.P.

You've heard it before: how doctors make poor patients and how an illness can be a valuable experience for a physician. What caught me by surprise was the realization that the concept of a physician assistant was more than just a concept when an associate was disabled.

I was the medical director of the Physician Assistant Program at the Bowman Gray School of Medicine when I was afflicted by a stroke. Though some of my colleagues might disagree, I felt I was in the prime of my career. Two years earlier I had reported my own case history in a prominent ophthalmology journal as an unusual phakomatosis with skin, retinal and central nervous system hemangiomas.

I recall warning my freshman students to avoid certain attending physicians' patients for interviews, because these particular doctors were unfriendly to physician assistant students. When I mentioned one name, a student interrupted me and said, "Oh, he died this weekend." I felt awful and realized how fragile we really are. A week later I was lying in a hospital bed.

From the Department of Medicine, Bowman Gray School of Medicine, Winston-Salem, 27103.

"I had lost my voice, my balance and my coordination, but I still had part of my brainstem, a heart and some courage. One physician assistant made it possible to enjoy Medicine again."

I also recall telling incoming students that they didn't have to look far for pathology. There were more than enough abnormalities for studying physical diagnosis among the student body and faculty. Now six months later I was a walking (barely) textbook of neurology.

Sure life is filled with ironies. But I had a lot of advantages: patient and understanding parents—"Sure, Bob, do whatever you like, Radiology, Ophthalmology or Plastic Surgery"; and supportive patients—"You warn me about salt and not taking my medicine; then you go and have a stroke."

But the greatest blessing of all was realizing that I had potential planted outside myself, in the clinicians I had bonded with during my teaching years. I had lost my voice, my balance and my coordination, but I still had part of my brainstem, a heart and some courage. One physician assistant made it possible to enjoy Medicine again.

Working alongside a graduate from the PA Program had always been a duet, not a duel. Now we had to modify the bond. There was no more time for Abbott and Costello routines. There was a deadline to meet so that we had to work more like Watson and Crick. The DNA model was a good one to approximate. Biology had taught me: good things come in pairs.

I noted that the weaker I was, the stronger my associate was. That seemed to be the beauty of dyadic interaction. One may really transfer power and knowledge to another and this transfer is catalyzed by an inherent difference or polarity of the two objects. There's a law of physics in there somewhere.

The PA became my eyes, ears and hands. Meanwhile, I became a more acute observer; certainly a more empathetic observer. And in being so, I learned a lot about my partner's techniques.

Another thing I noted was that once we solved our own problems, the difficulties the patients had were much easier to tackle. And the patients would open up to an ill-appearing practitioner easily. There is so much leverage afforded by an unfortunate situation. Though the genetic material may be flawed, the double helix through the flexibility of the bonds succeeds.

In a new or changed dyad, you're willing to perform new and daring feats. It's necessary to survive as a duo. Stable environments produce stereotyped patterns of interactions with patients and colleagues. The variable setting provided by collaboration allows more flexibility. Ideally, one clinician enters into action when the limits of his co-worker are exceeded, serving a shock-absorbing function.

A collaborator prods us to look at ourselves and our work in new ways. In science, genius is no assurance against a narrowed perspective. In *The Double Helix*, James Watson describes how he and Francis Crick discovered the molecular structure of DNA. He recounts how Linus Pauling made an error that contradicted his own proven biochemical theories about chemical bonds. When Pauling's paper about the triple alpha helix model was published, his error was obvious to Watson and Crick.

We all know that three's a crowd. Working alone, Pauling lacked a valuable second opinion. Watson and Crick imitated Pauling and beat him at his own game.

Consider also the sponge and hydra that can regenerate themselves after being forced through a wire mesh. And the small pieces of a flatworm can regenerate into a whole organism. We, of course, can't reproduce asexually; biosociation of two different genetic codes is the basic model for the successful creative act.

Observing patients from a greater distance is akin to ghostwriting. This offers a vicarious element as one relives the experiences of the co-worker. In doing so, one is forced to undergo a transfer of personality (from Dr. Jeckle to Mr. H-I-D-E). Ghosting is a useful exercise of putting oneself in someone else's shoes.

Seeing patients together should be like two actors going on stage fusing their talents and time together. Thinking of such a relationship as an interface of two scripts suggests the possibility of rewriting and editing aspects of such a partnership.

Compatibility is not a prerequisite for a successful collaboration. Gilbert and Sullivan quarrelled incessantly during their 20-year partnership. Sometimes dissonance or even hostility can energize a team. Garbled communication can be turned to one's advantage by opening a humorous potential. Consider the following example:

A bicycle salesman expounds the virtues of a particular bicycle to a prospective buyer. "You climb on this beauty at eight o'clock and by midnight you'll be in Chapel Hill." The customer curtly replies, "That's a fine thing. I don't know a soul in Chapel Hill and I'm stranded there at midnight."

This shift of emphasis to a seemingly irrelevant aspect of a concept is frequently the basis for enlightenment in art and scientific discovery. When one partner displaces attention to some neglected characteristic of the physical exam, a new set of possibilities emerges.

Working together on any project at times will border on an invasion of privacy. This can lead to intense rivalry or it may foster an increased capacity to put oneself in the skin of another, a key interviewing skill.

Co-workers live in a dynamic equilibrium. This presents us with a challenge that requires a restructuring of our mental organization to live in a symbiotic relationship. At times, there is a dangerous sublimation of the ego. Although some are convinced that collaboration can't be taught, and that the chemistry either works or it doesn't, I don't agree.

The nature of the bond between the famous Siamese Twins from rural North Carolina, Chang and Eng, was controversial. Why was it that Eng, who was perfectly healthy, died one hour after Chang, who was critically ill? The consensus was that Eng's death had nothing to do with a vital biological connection. However, Chang and Eng believed that the bond between them was vital.

A productive team does not share such a deterministic outlook. Ideally, collaboration is an amalgamation of two realms; a cohesive unit that belies the effort that it took to fuse the two together. The model we're seeking is the genetic material, the stuff people are made of. ❑



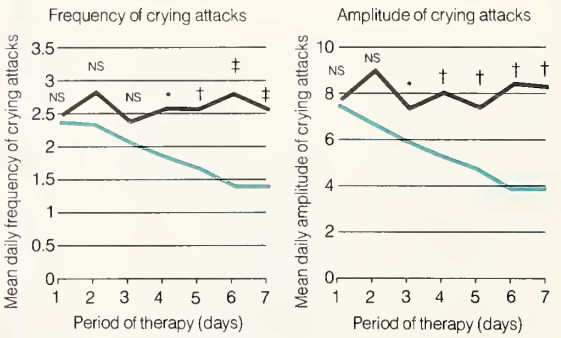
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Edward C. Halperin, M.D., Book Review Editor

***Epilepsy: Current Approaches to Diagnosis and Treatment*, edited by Dennis B. Smith. New York: Raven Press, 1990, 276 pages.**

Reviewed by Ugo Goetzl, M.D., Durham Clinic, P.A., Durham 27704.

The study and treatment of epilepsy has become sophisticated and specialized. *Epilepsy: Current Approaches to Diagnosis and Treatment* is an excellent multi-authored book that achieves its goal of emphasizing "new and evolving concepts in the diagnosis and treatment of the epilepsies." The management of epilepsy no longer involves the simple diagnosis of a "seizure disorder" and treatment with phenytoin and/or phenobarbital.

The subject has become so complex that it threatens to discourage non-neurologists from acquiring a practical knowledge of the field. Except for the first few chapters (section I), the editor, Dennis B. Smith, has avoided complexity and published a volume of interest to both the neurologist and the primary care physician. The book flows smoothly, the tables are thoughtfully constructed and the references are current.

From the Division of Radiation Oncology, Box 3085, Duke University Medical Center, Durham 27710.

The first chapter discusses the complicated classifications that provide the basis for rational choice of antiepileptic drugs and criteria for surgery. As a neurologist, I can resonate with the compulsiveness of epileptologists. When somewhat simplified, as in a later chapter, "Antiepileptic Drug Selection in Adults," the "science" of the pharmacological treatment of epilepsies really does make sense. Other chapters in section I, including those dealing with electroencephalography, prolonged monitoring, and advanced neuroimaging techniques, are well written but in my opinion too specialized to maintain the interest of the non-neurologist. Sections II and III, however, do provide useful theoretical and practical information for all clinicians.

The chapter on antiepileptic drugs for adults is well written. Monotherapy is one of the major concerns in the treatment of epilepsy, and its importance is discussed in the early part of this chapter. The author emphasizes the major issues involving polytherapy, including toxic side effects, compliance, drug interaction, and lack of improved seizure control. Specific drugs are examined with their advantages and disadvantages outlined in table form. This chapter concludes with a clinically useful summary of the drugs of choice for specific types of seizures.

David Treiman's chapter, "Special Treatment Problems in Adults," is must reading for those clinicians managing the seizure patient. Treiman explains the most common and difficult therapeutic challenges facing the physician. He deals with the treatment of the single seizure, prophylaxis, the pregnant patient, discontinuation of therapy, and status epilecticus. Dr. Treiman states that "carbamazepine is the drug of choice for women with epilepsy whose seizures can be controlled adequately with this drug." I would like to mention the ongoing controversy about antiepileptic drugs during pregnancy. This controversy was sparked recently by Jones et al.[1] in the *New England Journal of Medicine*. They report malformations and developmental delays in children exposed prenatally to carbamazepine. This issue is far from resolved, as shown by subsequent letters to the editor.

Psychological and behavioral factors are thoroughly covered in Section III. The final chapter highlights the pathogenesis of epilepsy and leaves the reader with an understanding of epilepsy upon which to build with future developments and research.

In summary, Dr. Smith has edited an excellent review of epilepsy both for the neurologist and the primary care physician. For the latter, it would also serve well as a reference source.

Reference

1 Jones KL, et al. Pattern of malformations in the children of women treated with carbamazepine during pregnancy. N Eng J Med 1989;320:1661-6.

***Practical Medical Halachah* (third revised edition), by Fred Rosner and Moshe Tendler. Hoboken: Katav Publishing House, 1990, $18.95.**

Reviewed by Edward C. Halperin, M.D.

It's awfully interesting to be a book review editor for a medical journal. You never quite know what's going to show up in the mail on any given day. A few weeks ago, I received *Practical Medical Halachah*. (The translation of the word *Halachah* is "law.") In some sense, "I asked for it." Our faithful readers will note that we have run, from time to time, book reviews on titles concerned with medical ethics. I suspect that an enterprising member of the staff of Katav Publishing House caught wind of this and sent us this new title.

As it turns out, I have read previous editions of this book. The third edition is expanded with new essays in various areas of medical ethics.

The book is largely in a question-and-answer format. In this regard it follows an age-old teaching method of Jewish law—the "responsa." This is a technique in which the law is elucidated in response to a series of questions. The questions offered in this particular volume come from members of the Association of Orthodox Jewish Scientists. As you might expect, the questions are detailed and complex. This is the book's strength and its failing.

For someone already well versed in issues of Jewish medical ethics, the book is entertaining. To the novice, however, many points will be obscure or missed because of a lack of necessary background. I can only recommend this book, therefore, to someone with a reasonable background in Jewish medical ethics who wishes to explore the issue further. The book would not be suitable for an introductory course, but only to supplement more recognized texts such as Jakobovitz's *Jewish Medical Ethics* or Rosner's *Modern Medicine and Jewish Law.* ❑

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A Woman's Sudden Allergy to All Foods

The Distilled Water Solution

Claude Frazier, M.D.

I was called to see a woman who worked as a secretary at a well-known resort where I had spent many vacations. Her allergist called me. "She is allergic to everything," he said.

When I arrived in town, I went to see the physician to get the patient's background. He told me again, "She is allergic to everything. I am glad to have you here. She thinks you walk on water. Maybe you can figure out her problem."

I then went to see the patient. She explained that after she ate, she would experience flushing, weakness, rapid heart beat, tightness of the jaws, the feeling of nearly passing out.

We went to see her physician at the diagnostic clinic, where the three of us discussed her symptoms and their onset. I asked the physician to obtain a fresh bottle of distilled water, let her ingest a small amount, and observe her reactions.

The physician told me quite frankly, "This is crazy. This is not going to work."

I told him, "I know food allergies, and this is not a food allergy." I then left the office.

"Allergies are not caused by emotions, but emotional problems can mimic allergic symptoms."

A little later, the physician called me in a high state of excitement. "She is experiencing the exact symptoms she described previously." He asked me if he should tell the patient she was suffering from an emotional problem.

"No, I'll talk to her."

I went to see the patient in her office. We spoke about her problem for a little while, and in the midst of our conversation, I said, "If you were allergic to penicillin—"

"I *am* allergic to penicillin," she exclaimed, interrupting me. Turning to her co-worker, she said, "See, he does know everything."

"*If* you were allergic to penicillin," I continued, "I would suggest you place five drops of a solution on your tongue every 10 to 15 minutes, doubling the dosage every time until symptoms appear. If symptoms do appear, remain at the present dosage. Now, I want you to do the same with foods, starting with clear broth, then gradually adding other liquids, then adding solids."

The patient had lost 45 pounds, and currently was eating only about 500 calories a day. In time, she worked up to a 2,000 calorie a day diet.

Allergies are not caused by emotions, but emotional problems can mimic allergic symptoms. ❑

From Doctor's Park, Asheville, NC 28801.

One Of A Kind



Zantac®

ranitidine HCl/Glaxo 150 mg and 300 mg tablets

Please see Brief Summary of Prescribing Information on adjacent page.

Glaxo/ROCHE

Zantac® 150 Tablets **CONDENSED BRIEF SUMMARY**
(ranitidine hydrochloride)

Zantac® 300 Tablets
(ranitidine hydrochloride)

Zantac® Syrup
(ranitidine hydrochloride)

The following is a brief summary only. Before prescribing, see complete prescribing information in Zantac® product labeling.

INDICATIONS AND USAGE: Zantac® is indicated in:
1. Short-term treatment of **active duodenal ulcer.** Most patients heal within four weeks.
2. **Maintenance therapy** for duodenal ulcer patients at reduced dosage after healing of acute ulcers.
3. The treatment of **pathological hypersecretory conditions** (eg, Zollinger-Ellison syndrome and systemic mastocytosis).
4. Short-term treatment of **active, benign gastric ulcer.** Most patients heal within six weeks and the usefulness of further treatment has not been demonstrated.
5. Treatment of **gastroesophageal reflux disease (GERD).** Symptomatic relief commonly occurs within one or two weeks after starting therapy and is maintained throughout a six-week course of therapy.

In active duodenal ulcer; active, benign gastric ulcer; hypersecretory states; and GERD, concomitant antacids should be given as needed for relief of pain.

CONTRAINDICATIONS: Zantac® is contraindicated for patients known to have hypersensitivity to the drug.

PRECAUTIONS: **General**: 1. Symptomatic response to Zantac® therapy does not preclude the presence of gastric malignancy. 2. Since Zantac is excreted primarily by the kidney, dosage should be adjusted in patients with impaired renal function (see DOSAGE AND ADMINISTRATION). Caution should be observed in patients with hepatic dysfunction since Zantac is metabolized in the liver.

Laboratory Tests: False-positive tests for urine protein with Multistix® may occur during Zantac therapy, and therefore testing with sulfosalicylic acid is recommended.

Drug Interactions: Although recommended doses of Zantac do not inhibit the action of cytochrome P-450 enzymes in the liver, there have been isolated reports of drug interactions that suggest that Zantac may affect the bioavailability of certain drugs by some mechanism as yet unidentified (eg, a pH-dependent effect on absorption or a change in volume of distribution).

Pregnancy: *Teratogenic Effects: Pregnancy Category B*: Reproduction studies have been performed in rats and rabbits at doses up to 160 times the human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Zantac. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: Zantac is secreted in human milk. Caution should be exercised when Zantac is administered to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: Headache, sometimes severe, seems to be related to Zantac® administration. Constipation, diarrhea, nausea/vomiting, abdominal discomfort/pain, and, rarely, pancreatitis have been reported. There have been rare reports of malaise, dizziness, somnolence, insomnia, vertigo, tachycardia, bradycardia, atrioventricular block, premature ventricular beats, and arthralgias. Rare cases of reversible mental confusion, agitation, depression, and hallucinations have been reported, predominantly in severely ill elderly patients. Rare cases of reversible blurred vision suggestive of a change in accommodation have been reported.

In normal volunteers, SGPT values were increased to at least twice the pretreatment levels in 6 of 12 subjects receiving 100 mg qid intravenously for seven days, and in 4 of 24 subjects receiving 50 mg qid intravenously for five days. There have been occasional reports of hepatitis, hepatocellular or hepatocanalicular or mixed, with or without jaundice. In such circumstances, ranitidine should be immediately discontinued. These events are usually reversible, but in exceedingly rare circumstances death has occurred.

Blood count changes (leukopenia, granulocytopenia, thrombocytopenia) have occurred in a few patients. These were usually reversible. Rare cases of agranulocytosis, pancytopenia, sometimes with marrow hypoplasia, and aplastic anemia have been reported.

Although controlled studies have shown no antiandrogenic activity, occasional cases of gynecomastia, impotence, and loss of libido have been reported in male patients receiving Zantac, but the incidence did not differ from that in the general population.

Incidents of rash, including rare cases suggestive of mild erythema multiforme, and, rarely, alopecia, have been reported, as well as rare cases of hypersensitivity reactions (eg, bronchospasm, fever, rash, eosinophilia), anaphylaxis, angioneurotic edema, and small increases in serum creatinine.

OVERDOSAGE: Information concerning possible overdosage and its treatment appears in the full prescribing information.

DOSAGE AND ADMINISTRATION: (See complete prescribing information in Zantac® product labeling.)

Dosage Adjustment for Patients with Impaired Renal Function: On the basis of experience with a group of subjects with severely impaired renal function treated with Zantac, the recommended dosage in patients with a creatinine clearance less than 50 ml/min is 150 mg or 10 ml (2 teaspoonfuls equivalent to 150 mg of ranitidine) every 24 hours. Should the patient's condition require, the frequency of dosing may be increased to every 12 hours or even further with caution. Hemodialysis reduces the level of circulating ranitidine. Ideally, the dosage schedule should be adjusted so that the timing of a scheduled dose coincides with the end of hemodialysis.

HOW SUPPLIED: **Zantac® 300 Tablets** (ranitidine hydrochloride equivalent to 300 mg of ranitidine) are yellow, capsule-shaped tablets embossed with "ZANTAC 300" on one side and "Glaxo" on the other. They are available in bottles of 30 (NDC 0173-0393-40) tablets and unit dose packs of 100 (NDC 0173-0393-47) tablets.

Zantac® 150 Tablets (ranitidine hydrochloride equivalent to 150 mg of ranitidine) are white tablets embossed with "ZANTAC 150" on one side and "Glaxo" on the other. They are available in bottles of 60 (NDC 0173-0344-42) and 100 (NDC 0173-0344-09) tablets and unit dose packs of 100 (NDC 0173-0344-47) tablets.

Store between 15° and 30° C (59° and 86° F) in a dry place. Protect from light. Replace cap securely after each opening.

Zantac® Syrup, a clear, peppermint-flavored liquid, contains 16.8 mg of ranitidine hydrochloride equivalent to 15 mg of ranitidine per 1 ml in bottles of 16 fluid ounces (one pint) (NDC 0173-0383-54).

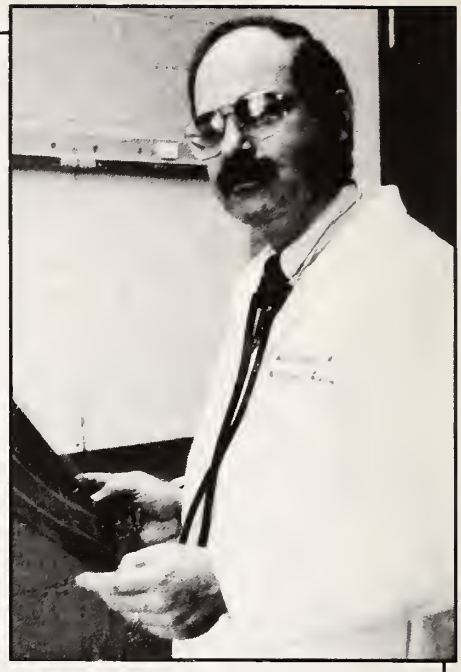
Store between 4° and 25° C (39° and 77° F). Dispense in tight, light-resistant containers as defined in the USP/NF.

September 1990

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Research Triangle Park, NC 27709

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ZAN858R3 Printed in USA October 1990



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In Memoriam

Walter Lee Crouch, M.D., of the New Hanover-Pender County Medical Society, died on September 7, 1990.

Dr. Crouch received his degree from the University of Maryland Medical School in 1946. He was a 38-year member of the North Carolina Medical Society.

Charles E. Inman, M.D., of the Robeson County Medical Society, died on October 14, 1990.

Dr. Inman received his degree from Duke University Medical School in 1951. He was a 37-year member of the North Carolina Medical Society.

F. Stafford Wearn, M.D., of the Iredell County Medical Society, died on December 5, 1990.

Dr. Wearn received his degree from Harvard Medical School in 1932. He was a 14-year member of the North Carolina Medical Society.

Bruce Hugh Dorman, M.D., of the New Hanover-Pender County Medical Society, died on April 4, 1991.

Dr. Dorman received his degree from Duke University Medical School in 1948. He was a 36-year member of the North Carolina Medical Society.

Due to space restrictions, the *Journal* has adopted the style of obituaries used in the *New England Journal of Medicine.*

AUTHORS

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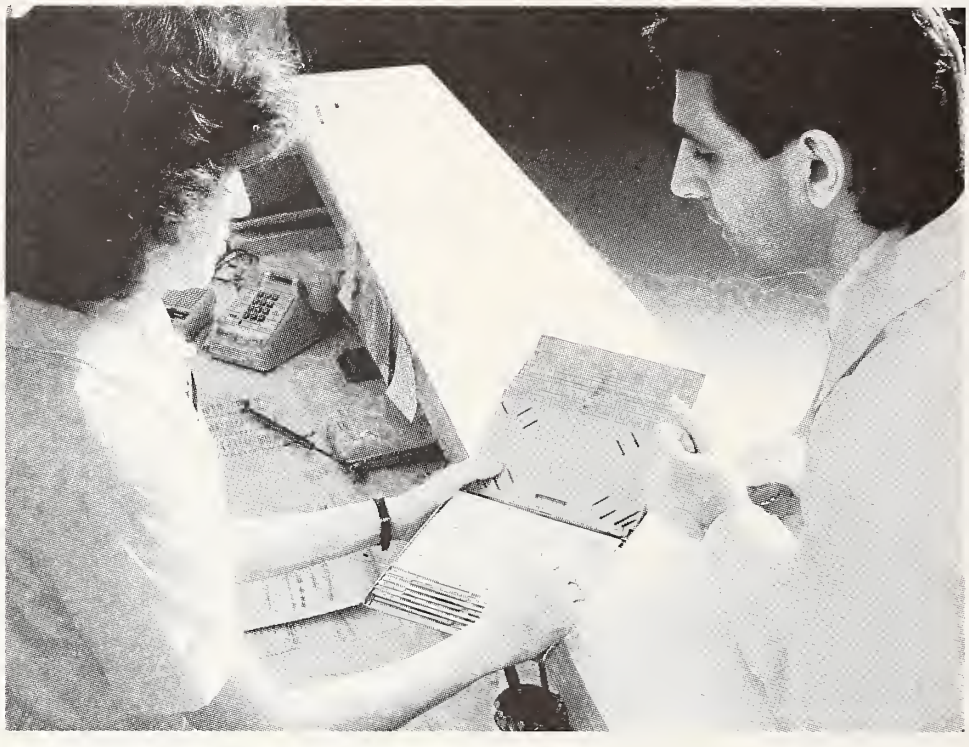
Attach to the two copies of the manuscript a cover letter giving the address and telephone number of the person who will correspond about it, and address the completed communication to the Editor, Box 3910, Duke University Medical Center, Durham, NC 27710.

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Letters to the Editor

Comment from Dr. Bailey

To the Editor:

Thank you for publishing the paper by Drs. Gutman and Forrest, "Thirty-seven Year Follow-up of an Infant with Severe Renal Tubular Acidosis" (1991;52:185-8). This was indeed an interesting patient for me to follow through the pediatric years.

I should like to acknowledge the following teachers who influenced my interest in renal problems—Dr. Billy MacNider, Professor of Pharmacology at UNC, Dr. James C. Andrews, Professor of Biochemistry at UNC, and Dr. Alexis F. Hartmann, Chairman of the Department of Pediatrics at St. Louis Children's Hospital. Dr. David Lockhart, Duke pediatric resident rotating through the service at Watts Hospital, ordered the flat plate of the abdomen which revealed the bilateral nephrocalcinosis in this three-week-old infant. Dr. Jack Hughes, staff urologist at Watts Hospital, kindly did the chemical analyses of the stones the patient passed, and he followed him from a urologic standpoint. He too was influenced by Drs. MacNider and Andrews at UNC.

This patient was presented to Dr. Fanconi of Switzerland at Pediatric Grand Rounds at Duke. Dr. Reginald Lightwood of Great Ormand Street in London reviewed his history with me. Both of these international experts in this field predicted that he would outgrow the problem of acidosis. He did not.

Again I wish to thank Drs. Gutman and Forrest for preparing this paper for publication and the *Journal* for accepting it for publication.

Bailey Webb, M.D.
2616 Erwin Rd.
Durham 27705

Appreciation for Dr. Graham's articles

To Dr. Graham:

Many thanks for your communications and for all you do to keep our class informed and involved. I have read every word of every article you have sent me. You are a great writer and certainly deserve the title "Distinguished."

The scientific articles are good. I especially enjoyed your somewhat personal lecture which involved cholesterol, etc. ("CHD, MI, & I: The Story of a 57-year Love-Hate Relationship," NCMJ 1989;50:567-70). It's interesting that you were several years ahead of the pack. Everybody thinks now a couple of eggs a week or even more are not so bad.

However, as are most people, I was most interested in your dissertations on our two years at the University of North Carolina Medical School ("The Halcyon Days of Youth," Part I, 1990; 51:628-34; Part II, 1991; 52:44-9). That really brought back some memories.

A.B. Conger, M.D.
#125 2525 Norris road
Columbus, GA 31907

Analgesic induced headache

To the Editor:

I have diagnosed 17 new headache patients as having "analgesic induced headache" during the last month. The medications which these patients have been taking to relieve their headaches have actually increased their head pain. Drug induced refractory headaches represent an "Unrecognized epidemic."[1] This widespread condition is inadequately recognized by physicians and their patients.

Rebound headache from withdrawal of caffeine or ergots has been long recognized. Many over-the-counter headache and sinus medications contain a considerable amount of caffeine (Anacin®, BC-Powder®, Cope®, Excedrin ES®, Midol®, and Vanquish®). Physicians are aware of harmful effects of prolonged ergot use, including the symptoms of vasoconstriction and rebound.

Less well recognized is the fact that ALL known analgesic medications when taken regularly have the potential to increase headache frequency and severity. Analgesics containing short acting barbiturates (Fiorinal®, Esgic®, Phrenilin®, Axotal®, etc.) seem particularly frequent offenders. Even small doses of over-the-counter analgesic medications such as one to two ASA or acetaminophen per day can increase headaches in a headache prone individual. It is not presently known whether or not nonsteroidal anti-inflammatory drugs (NSAIDs) have this headache potentiating effect.

In 1982 Kudrow[2] noted that analgesic overuse not only increased headache frequency but seemed to make patients resistant to treatment with standard prophylactic medication. Rapoport et al.[3] found that 66% of these patients with analgesic rebound headaches improved within one month of discontinuing their analgesic medication. After two months off all analgesics, 81% of these patients had significantly reduced headache frequency and severity. Rapoport et al.[4] suggested that the analgesic washout period may last as long as 12 weeks.

Mathew et al.[5] later studied 200 patients with drug induced refractory headaches and concluded: (1) daily use of symptomatic or immediate relief medication resulted in chronic daily

headache; (2) discontinuing daily symptomatic medications itself results in improvement in headaches; (3) concomitant use of symptomatic medications nullifies the effect of prophylactic medications; (4) discontinuing daily medications enhances the beneficial effect of prophylactic medications (Beta-blockers, tricyclic antidepressants, etc.).

Treatment of patients with refractory headaches associated with analgesic use may require hospitalization. Initial outpatient treatment attempts may include either abrupt or gradual medication (and caffeine) withdrawal. When analgesics containing short acting barbiturates are involved, withdrawal should be gradual. Increased pain is expected for three to seven days and temptation to treat it with any type of analgesic medication must be resisted. Withdrawal symptoms may last for several weeks. Ice or heat compresses as well as phenothiazine medication may be used. Phenothiazines may also be helpful for related nausea and vomiting. Inpatient treatment with intravenous dihydroergotamine 45 has been well described.[6,7] Maintaining the prophylactic headache medication after the analgesic washout period of 12 weeks is essential as these patients continue to have their primary headache predisposition.

I believe that the described analgesic-induced headaches occur only in individuals predisposed to having headaches. The majority of these individuals have had intermittent migraine with or without aura earlier in life, and most have a strong family history of headaches. To my knowledge, individuals not predisposed to having headaches who take similar medications (arthritic patients, etc.) do not develop this syndrome. It is only after frequent use of immediate relief medication in predisposed individuals that the headaches progress from episodic to chronic daily headaches.

The purpose of this letter is to heighten physician awareness of this all too frequent condition. While most cases begin with over-the-counter drugs (aspirin, acetaminophen, etc.), physicians may be responsible for advancing the problem to the next higher level of prescription drugs (Fiorinal®, Darvocet®, etc.). In patients with chronic daily headaches we must educate them against the daily use of ANY analgesic medication and treat the primary headache condition with appropriate prophylactic medication.

James U. Adelman, M.D.
Adelman Headache Center
510 N. Elam Ave.
Greensboro 27403

References:
1 Edmeads J. Analgesic-induced headaches: an unrecognized epidemic. Headache 1990:614.
2 Kudrow L. Paradoxical effects of frequent analgesic use. Adv Neurol 1982;33:335-41.
3 Rapoport AM, Weeks RE, Sheftell FD, et al. Analgesic rebound headache: theoretical and practical implications. Cephalgia 1985;5(suppl 3):448-9.
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7 Silberstein SD, Schulman EA, Hopkins MM. Repetitive intravenous DHE in the treatment of refractory headache. Headache 1990:334-8.

Budget cuts affect the mentally ill

To the Editor:

Would you deny insulin to a diabetic, or digoxin to a heart patient?

Would you deny money needed to assure that released victims of mental illness—a physical illness just like diabetes or heart disease—take their medications?

The General Assembly has a proposal to take away more of the already severely budget-impacted mental illness "safety net." This would include much of the remaining, already inadequate community follow-up essential to stabilize patients released from Umstead, Dorothea Dix, Cherry, and Broughton Hospitals.

"Revolving door" patients who increasingly fill state hospital beds under "deinstitutionalization" usually get destabilized because they neglect, forget, or refuse to take their medications.

North Carolina's 1983 Outpatient Commitment Law allows outpatient, court-supervised, conditional release during good behavior. The good behavior includes not being a danger to oneself or others and taking the prescribed medications.

The proposal to chop an additional $30 million off the state mental illness budget would eliminate about 100 more of the dwindling state hospital beds. At the same time it would eliminate many outpatient "day programs" and the overworked case managers who supervise released patients.

We need more, not less case managers!

Let's review events of the past half century affecting mental hospitals.

In the peak year of 1955, in an era of "warehousing" mental patients, there were about 500,000 beds in U.S. public mental hospitals. Half of all U.S. hospital beds were in mental hospitals.

Today, under "deinstitutionalization," there are about 125,000 beds. The number is still going down, here and all over the U.S.

The new drugs allowed the release of most of the clients. Antipsychotic drugs such as chlorpromazine (Thorazine), the first of the "major tranquilizers," not only alleviate distressing symptoms such as hallucinations and delusions, but help control acting up clients.

Were it not for the antipsychotic and antidepressant medications introduced in the last 35 years, obstreperous clients—a small minority—would probably still be managed with straitjackets, padded cells, and perhaps with lobotomies. They would still be subjected to icepacks and prolonged warm baths. These were the best available patient management methods in the decade after World War II.

It's a good bet that you know somebody who has a mentally ill relative or friend.

Unfortunately mental illness is still a somewhat taboo subject—as cancer used to be (lest we forget, around 1940, no newspaper would print the word cancer).

During World War II, a million men were rejected from military service for neuropsychiatric reasons. Another million were released from the armed services. About 13 million Americans were in the military service in World War II.

Recognition of the widespread impact of mental illness revealed during the war led to establishment of the National Institute of Mental Health after World War II.

About 1% of the U.S. population is or will become schizophrenic at some time during their lives. Another 1% will become manic depressive.

A good many more than that will become suicidally, clinically depressed from some disastrous event such as war experiences, a death, divorce, or loss of a job—or for no apparent reason at all.

The beds that the most severely impacted of these patients used to occupy have largely disappeared—but the patients did not disappear. They are your neighbors. Do you want them cast adrift?

I am a former congressional researcher who writes on historical, medical, and governmental topics. I am solely responsible for these comments.

For further information:
North Carolina Alliance for the Mentally Ill, 3716 National Dr., Suite 213, Raleigh 27612, 919/783-1807.

James S. Sweet, Ph.D.
3522 Courtland Dr.
Durham 27707

Comment from the State Board of Medical Examiners

To the Editor:

Liaison between the North Carolina State Board of Medical Examiners and the *North Carolina Medical Journal* is important, and I have been appointed by the Board to serve this function. I have sent you a copy of my recent report to the Executive Council of the Medical Society and am appreciative of your decision to publish relevant parts in the *Journal*.

My own goals on the Board are to enhance alliances with the Medical Society, individual physicians, the public, and, most importantly, the patients. I am available to you as a resource regarding items provided to the Board of Medical Examiners. While the primary function of the Board of Medical Examiners is to protect the public, this is also one of the goals of the Medical Society and of each individual physician. Thus I see us as collaborators in an extremely important issue.

Nicholas E. Stratas, M.D., Secretary
Board of Medical Examiners of the
State of North Carolina
P.O. Box 26808
Raleigh 27611-6808

Editor's reply

To Dr. Stratas:

We enjoyed the good services of Dr. Eben Alexander when he acted as liaison, and we are looking forward to collaboration with you.

Eugene A. Stead, Jr., M.D.



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YOCON®
YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

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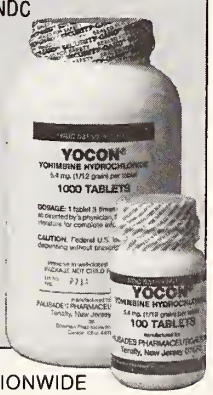
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References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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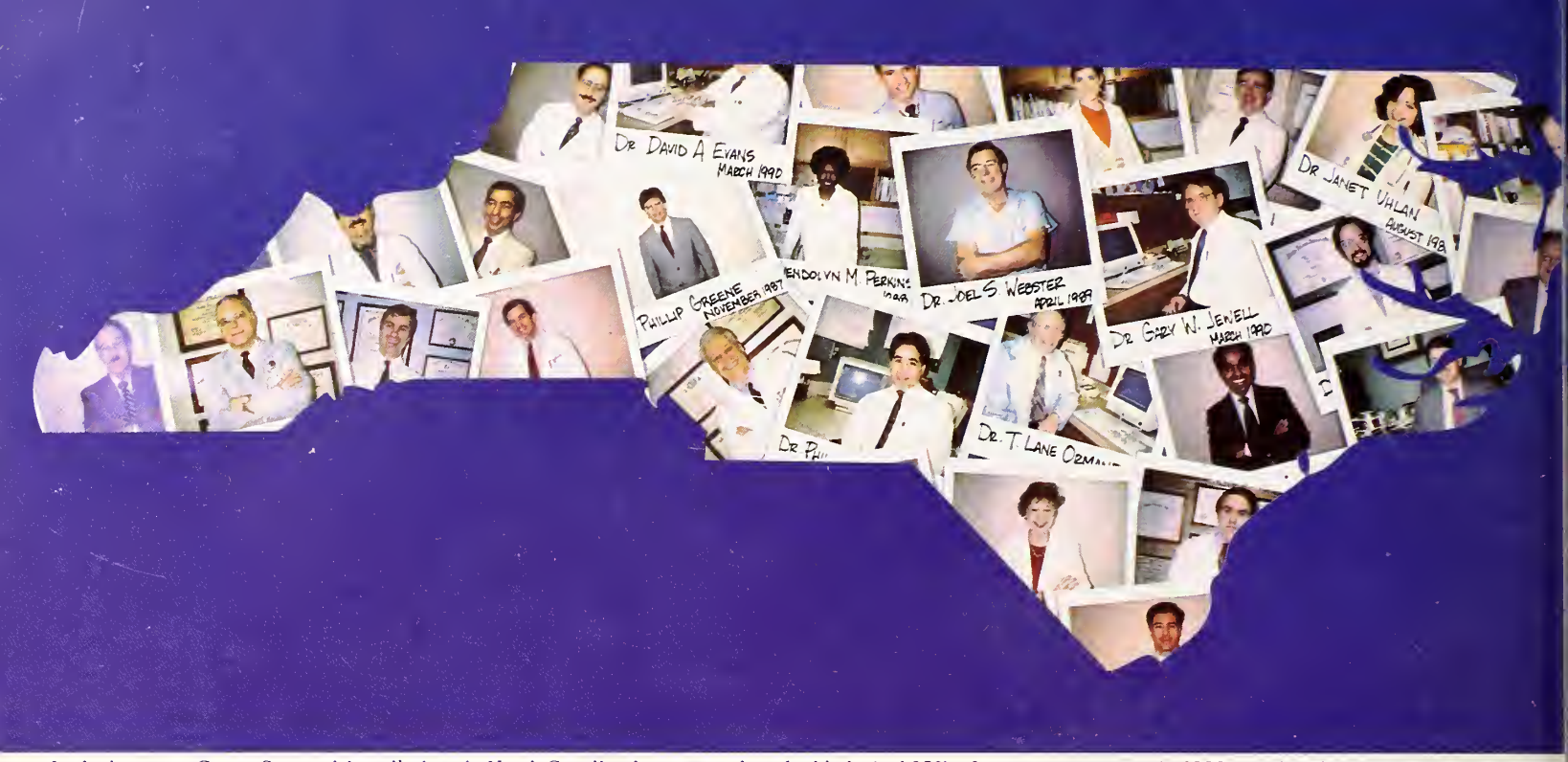
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The Future of the Journal

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North Carolina Medical Journal

FOR DOCTORS AND THEIR PATIENTS

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Intravenous Drug Use Fools Us Again

The importance of open lung biopsy in evaluating a patient with progressive interstitial lung disease presenting with pneumothorax

Daniel A. Yohay, M.D., and Eugene Z. Oddone, M.D.

A 39-year-old man addicted to intravenous drugs was admitted through the emergency room with worsening shortness of breath and a spontaneous right pneumothorax. His symptoms began approximately six months prior to admission when he noticed fatigue with minimal exertion and weight loss. These symptoms persisted until one month prior to admission when he experienced dyspnea, dry cough, and subjective fever. A chest film taken in the Medical Outpatient Clinic revealed interstitial prominence and calcified hilar adenopathy. Laboratory evaluation showed a positive rheumatoid factor (1:1280). His intravenous addiction was for Preludin preferentially. His technique for injection involved crushing a tablet, dissolving it in water and drawing the solution into a syringe through cotton. One week before admission his cough increased and his dyspnea worsened.

Blood pressure was 136/92, pulse 90, respirations 20, and temperature 38.3 degrees Centigrade. He was alert and oriented with a normal neurological exam. His fingernails were clubbed. Skin was without petechiae or obvious hemorrhage. The lungs showed decreased breath sounds at the right base and bibasilar rales. Cardiac examination was normal except for an S4. There was no peripheral edema.

Laboratory evaluation showed normal electrolytes, blood counts, and differential, room air blood gas was abnormal with a pH of 7.49, PO_2 51, and a PCO_2 33. Chest radiograph revealed bilateral air space disease as well as prominent interstitial markings, apical bullous disease, calcified hilar adenopathy, and a right subpulmonic pneumothorax. Electrocardiogram was normal except for diffuse T wave inversions throughout the precordial leads. Antibody to human immunodeficiency virus (HIV) was negative.

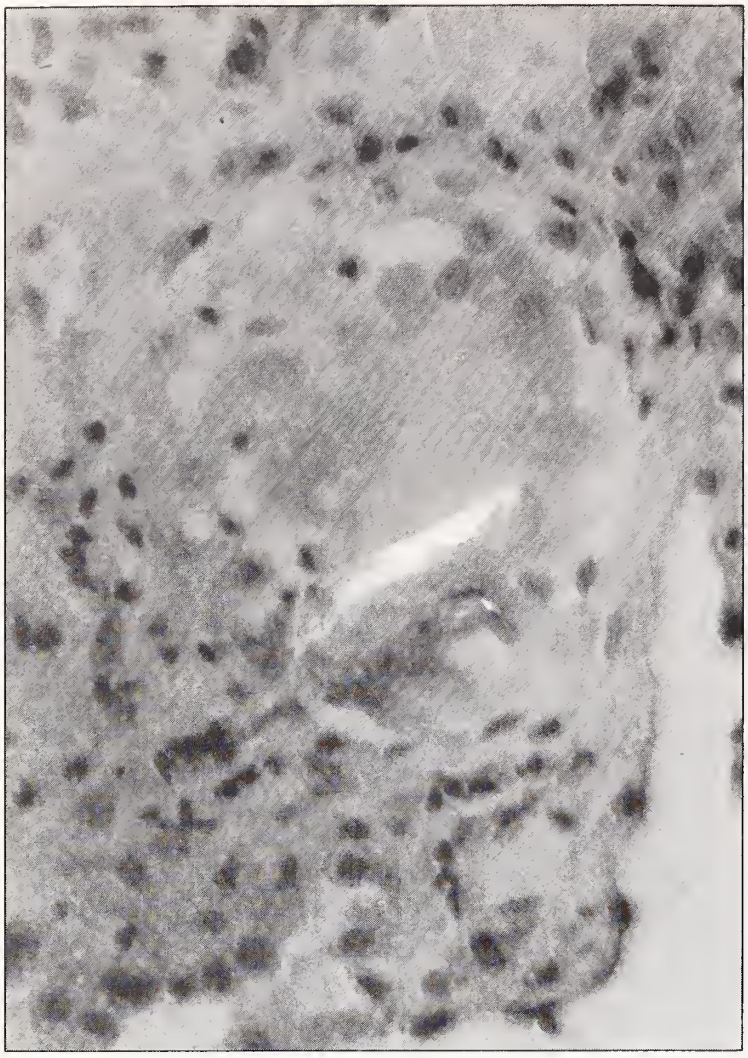
The patient was treated with a posterior chest tube and IV antibiotics for a presumed pneumonia despite a nondiagnostic sputum gram stain and negative cultures of blood and sputum. His temperature and cough improved but his hypoxemia and interstitial pattern on chest radiograph persisted despite adequate re-expansion of his lung and concomitant discontinuation of his chest tube. Further diagnostic evaluation showed significant restrictive lung disease on adequate effort pulmonary function testing: forced expired volume in one sec. (FEV1) 50%, forced vital capacity (FVC) 44%, FEV1/FVC 76%, carbon monoxide transfer factor 23% (DLCO). Bronchoscopy showed normal bronchial anatomy, transbronchial biopsies and bronchial brushings were nondiagnostic. Four sputum smears for acid fast bacilli were negative with subsequent negative cultures. Skin testing showed anergy to all tested antigens. Open lung biopsy was performed to evaluate the patient's persistent infiltrates and hypoxemia. The pathologic finding showed granulomatous formation surrounding a foreign material which had a characteristic birefringent pattern consistent with talc (figure 1, next page). All other special stains and cultures from the lung biopsy were negative.

He was given no additional specific therapy and was discharged after a two week hospital stay. His cough, fever dyspnea had resolved. A room air blood gas at discharge showed a PO2 of 72. We decided not to treat the patient with steroids secondary to the high risk of immunosuppression without clear evidence of benefit.

Discussion

This case illustrates a rapidly progressive pulmonary disease marked by dyspnea, cough, and fever in an HIV-negative drug addict. The patient did not improve significantly during the initial days of hos-

From the Department of Medicine, Duke University Medical Center, Durham, 27710.



Granulomatous formation surrounding a foreign material which had a characteristic birefringent pattern consistent with talc.

pitalization despite re-expansion of his lung and antibiotic therapy. When his HIV antibody was discovered to be negative, we questioned the patient about the specific practice of his intravenous drug use. It was at this point that we decided to proceed with open lung biopsy which provided the final diagnosis of talc granulomatosis. Intravenous talc administration occurs in the IV drug abuser who pulverizes oral medications which contain talc fibers as filler for parenteral use. Commonly used drugs include amphetamines, methadone, dilaudid, preludin and talwin. After IV injection, large talc particles (magnesium silicate) become entrapped within the pulmonary vasculature. Talc foreign bodies induce perivascular and interstitial granulomas consisting of macrophages, multinuclear giant cells, and lymphocytes causing progressive interstitial fibrosis. The most common symptoms of IV talc lung disease are chronic cough and dyspnea and occasionally hemoptysis. Spontaneous pneumothorax may also be seen in IV talc disease.[1]

The radiologic findings include progressive diffuse nodularity, volume loss, and progressive massive fibrosis, occurring most commonly in the upper lung fields. Pulmonary function tests most commonly show decreased DLCO first, and the both restrictive and obstructive abnormalities may be seen later in the course of the disease.[1]

The diagnosis of talc granulomatosis is usually made by open lung biopsy. There is one case report of bronchoalveolar lavage capturing a birefringent material which was analyzed as talc (magnesium silicate).[2]

There is no proven therapy for pulmonary disease due to talc. There have been two case reports of intermittent improvement in hypoxemia and chest radiographic findings with Prednisone therapy.[2,3] However, Paré reported a long term follow-up of six patient's with pulmonary talc disease all of which develop severe respiratory disability despite discontinuing drug use.[1] Three died from progressive pulmonary disease within five years.

This case illustrates the importance of attaining a histologic diagnosis in the setting of worsening interstitial lung disease in an IV drug abuser. The reticular nodular and calcified hilar adenopathy pattern on chest radiograph of IV talc disease may be identical to that of sarcoidosis. A variety of other connective tissue diseases including scleroderma, systemic lupus erythematosus, and rheumatoid arthritis have similar radiographic appearance. Several pulmonary infections can also be mistaken for IV talc lung disease including parenchymal TB, chronic coccidiosis, histoplasmosis, and opportunistic infections in the HIV-positive patient. Aggressive diagnostic procedures are needed to define this disease and exclude reversible causes. ❑

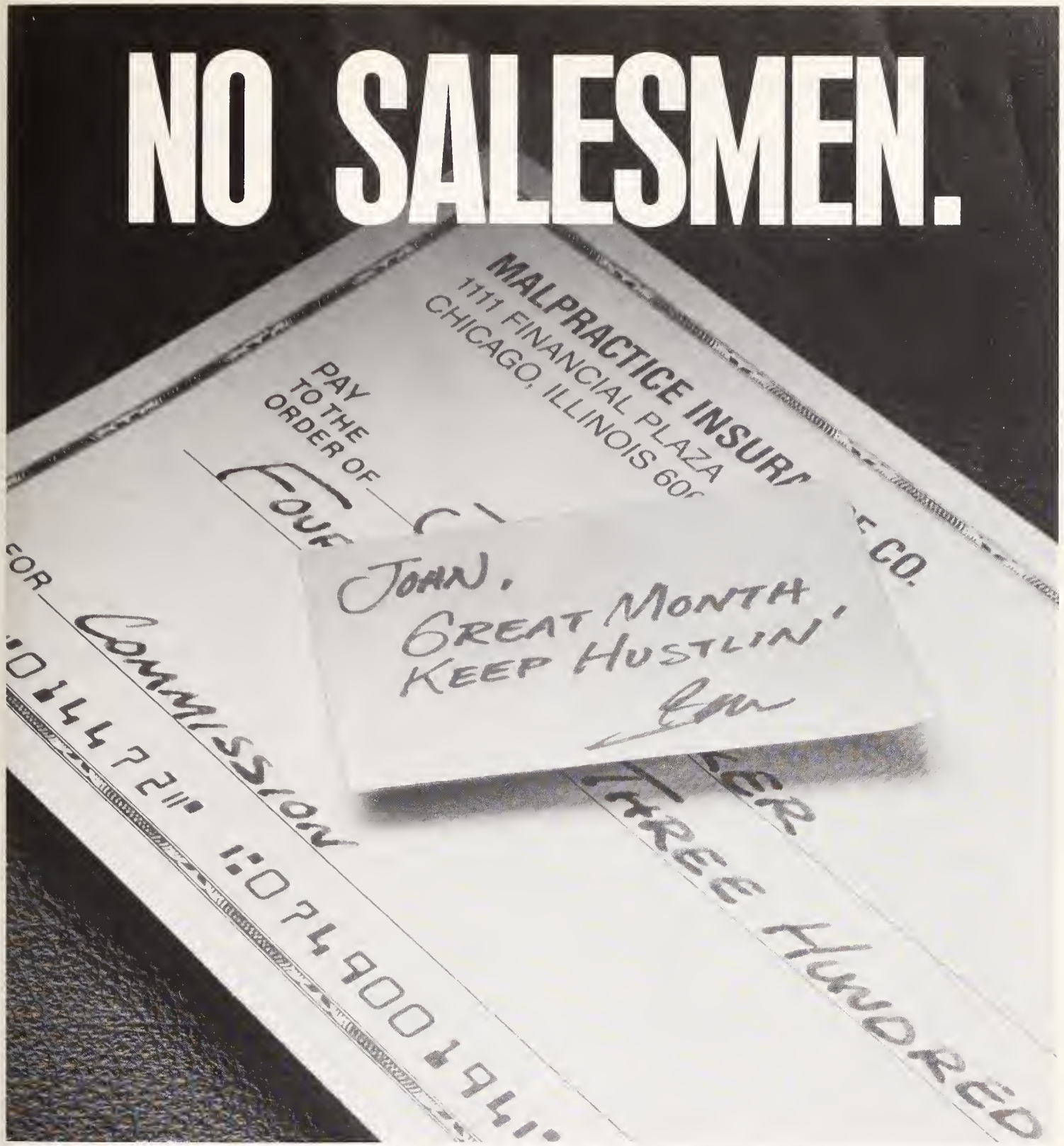
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Aphorisms of the Month

Edited by Daniel Sexton, M.D.

Vision, Experience, Learning, and Ignorance

Vision is the art of seeing the invisible.

—Jonathan Swift

Experience is a comb nature gives us when we are bald.

—Chinese Proverb

Never underestimate the power of stupid people in large groups.

—Anonymous

It is that which we do know which is the great hindrance to our learning that which we do not know.

—Claude Bernard

Ignorance is never out of style. It was in fashion yesterday, it is the rage today and it will set the pace tomorrow.

—Frank Dane

The learned fool writes his nonsense in better language than the unlearned, but it is still nonsense.

—Benjamin Franklin

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The Future of the Journal

Francis A. Neelon, M.D.

This editorial, a product of our Associate Editor and approved by the Chairman of the Editorial Board, gives basic information about the *Journal*. This should help the membership, officers and council to understand the background of the *Journal*.

—Charles W. Styron, M.D.

The causes (and the cure) of medical journals have never been entirely clear. We do know that doctors do and probably always will want to tell their colleagues about their clinical experiences, problems, successes, failures, thoughts, ideas, philosophy, experiments, studies. The ability of doctors to preserve their recountings in print has played a long and luminous history in Medicine, although recent developments in medical publishing have tended to devalue the worth of this kind of communication. While the number of journals published each month seems to grow exponentially, the nature of the publications takes on a gray sameness: journals devoted to narrowly "scientific" articles on a broad range ("general journal") or a constricted range of topics ("specialty journals"); or publications devoted to the political, legal or business aspects of Medicine. The journals published by the medical societies of the various states (there are 32 in all) have a unique opportunity to preserve the noble tradition of Medicine—that of providing a forum by which doctors in one area, bound by ties of community, locale, shared history and common interest, can communicate to their colleagues those things that excite, provoke, amaze or concern them. Our *Journal* has attempted to fill that otherwise neglected niche for the doctors of North Carolina.

In many ways we believe that the *Journal* is a great success. We are proud of the innovations (layout, typeface, cover design) that have enhanced the visual attractiveness of the *Journal*. So, too, are we proud of the variety and quality of the articles that we publish each month, and the number of sources from which those articles come. In the past 12 months we have published 126 papers from:

Source	Number
Medical Schools*	65
Other Physicians	42
Non-Physicians	19

We are pleased, as well, by the response of our readers to the material we publish. In the past year, correspondence from our readers has occupied 24 pages of the *Journal*. We see the journals sponsored by our sister states and recognize the vitality demonstrated by the volume of letters we receive, by the number (nearly 40 last year) of manuscripts that we cannot accommodate because of lack of space or suitability, by the submissions from medical students, from nurses, from patients themselves. We are flattered by the requests to reprint our articles elsewhere and by the correspondence that comes from overseas (a reflection of the fact that we are listed in the *Index Medicus*). By careful attention to fiscal matters (for example, the *Journal* is "set in type" on a Macintosh computer by our Managing Editor, Laurel Ferejohn, in the basement of Duke Hospital), we have been able to keep the yearly direct costs of publishing the *Journal* at under $12 per subscriber.

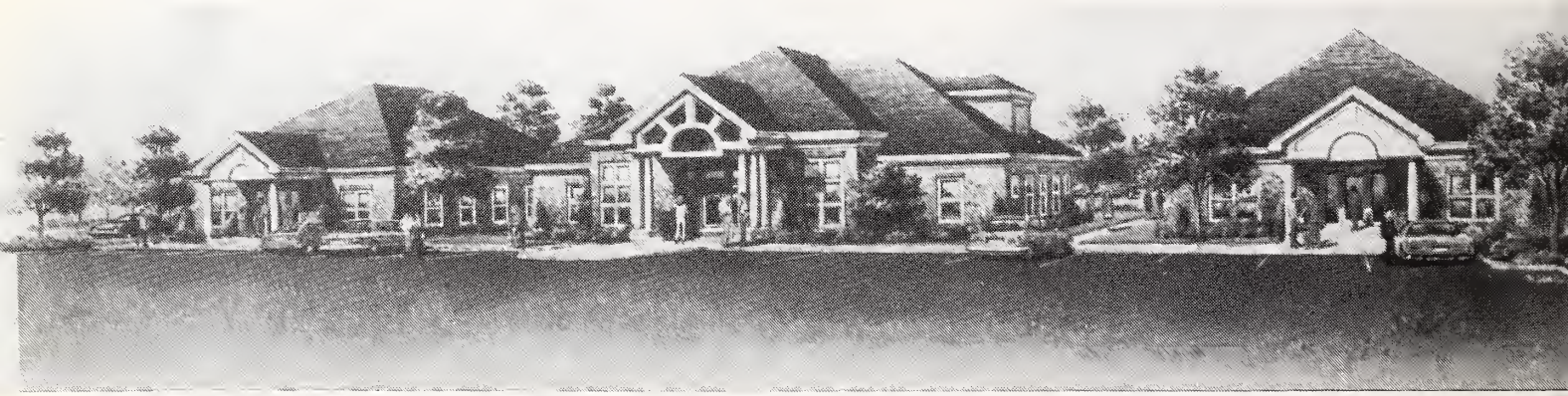
But it is not enough to list achievements of the past or even to enumerate our ideas and hopes and aspirations for the future. Now we need the advice and guidance of you, our readers. Eugene A. Stead, Jr., M.D., has announced his retirement as Editor, effective January 1, 1992. Edwin W. Monroe, M.D., Presi-

Dr. Neelon is Associate Editor of the *Journal* (Department of Medicine, Duke University Medical Center, Durham 27710). Dr. Styron is Chairman of the Editorial Board (615 St. Mary's St., Raleigh 27605).

*Publication by Medical School: Bowman Gray, 12; East Carolina University, 3; Duke University, 27; The University of North Carolina, 23.

dent of the North Carolina Medical Society, has solicited the input of all *Journal* subscribers in shaping the future of the *Journal*. Included with this issue is a brief questionnaire asking your opinions about some of the various departments of the *Journal* and your thoughts about changes in direction that it might take. We strongly urge that you fill out and return (postage paid by the Medical Society!) the questionnaire. Remember, this is not a scientific survey, but a democratic one. Any member who wishes may "vote," but only those who do so will have a voice in the future of the *North Carolina Medical Journal*. ❑

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Organ Transplantation in North Carolina

A Response to the Inspector General's Report

Marion S. White, M.S.P.H., and Georjean Stoodt, M.D., M.P.H.

In March, 1991, the Inspector General issued a draft report, "The Distribution of Organ Transplantation: Expectations and Practices."[1] Two of its conclusions resulted in media publicity and reactions which assumed racial discrimination as a factor. These conclusions were that blacks wait almost twice as long as whites (13.9 months instead of 6.5 months) for first transplant, and that patients at some transplant centers wait much longer than those at other centers.

The United Network for Organ Sharing (UNOS) is preparing a response to the Inspector General's Report; a preliminary summary of the UNOS findings were reported at the Annual Meetings of the American Society of Transplant Physicians in May, 1991.

In attempting to understand the factors behind the data, and to understand the situation in North Carolina, we have gathered information on a number of donor referrals and actual donors for one year from the three organ procurement agencies in the state: Carolina Organ Procurement Agency; Charlotte Organ Procurement Agency; and North Carolina Baptist Hospital. This information included numbers of dialysis patients and numbers transplanted (from the Southeastern Kidney Council), and the kidney transplant situation at UNC Memorial Hospital and Duke University Medical Center.

Essentially all organs are distributed according to UNOS policies. Most basically, transplants require blood type matching with donors. Organs are first offered locally (within the Organ Procurement Agency service area) based on a point system, and then nationally, based on the same point system. Points are allocated to potential recipients based on time of waiting on the transplant list (up to 1.5 points), the quality of antigen match of the donor to recipient (up to 10 points), panel reactive antibody (up to 4 points), and medical urgency (at the local level only). However, a six antigen match *requires* that the kidney be offered to the matched candidate.

Clearly, the majority of points are for the quality of the match. Thirty years ago, transplants were undertaken only between identical twins. With the advent of HLA testing in the 1960s and the introduction in 1964 of Prednisone and Azathioprine to treat and suppress rejection, transplants became possible on a broader scale. Immunosuppressants decrease the chance of rejection but do not eliminate it. There is currently a controversy within the transplant community concerning whether matching has any effect at all on graft survival and whether the biggest value accrues from the freshest kidneys with the shortest cold ischemia time, or whether matching should be *the* major consideration. There appear to be insufficient data on five and six antigen matches, however, to test these two opposing views. The differences in months of graft survival now appear to be so slight that thousands of first kidney transplants are needed to detect statistical differences among antigen matches.[2]

The proponents of good matches have a further argument beyond immediate graft survival, however. They argue that immunosuppressants are effective, extremely powerful, and so new that it is not yet known whether they perhaps have terrible long-term side effects. Thus a good match is important.

The Complicating Factor of Antigen Matching

The issue of antigen matching has an impact on transplantation rates for different racial groups, particularly for blacks. There are genetic differences among ra-

See also Dr. Sanfilippo's editorial on this subject in this issue of the Journal (page 367).

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"The unaddressed contribution of antigen matching to differences between black and white transplantation rates is an important gap in the Inspector General's Report."

cial groups; some antigens typically appear in only one race. The antigen "B44," for example, would only rarely appear in whites but is common among blacks.

Thus the chance of a best match coming from a donor of a different race is less than the chance of it coming from a donor of the same race. This chance of finding a good match increases as the donor pool increases, but blacks have a much lower rate of organ donation across the nation. In addition, for kidneys, there are a disproportionate number of blacks needing kidney transplants because of their relatively high rate of kidney disease. And, due to a high rate of chronic disease at a younger age, particularly from hypertension, black potential donors may be excluded for medical reasons at a *higher* rate than others. Finally, blacks are over-represented in the 'B' blood type which, nationally, is the smallest of the three common blood types. 'B' donors are among the least common donors.

The unaddressed contribution of antigen matching to differences between black and white transplantation rates is an important gap in the Inspector General's Report. The Report states that after controlling for blood type, age, and level of sensitization, blacks wait nearly twice as long as whites for a kidney.[1] It only briefly mentions antigen matching as one possible explanation for the disparity in waiting time. However, as explained above, antigen matching is a major factor in the computerized point system used by UNOS in allocating organs and in the decisions made by many transplant surgeons as to whether to accept a kidney for transplantation. There are racial differences among the distribution of some antigens; the chance of a close match is smaller across, compared to within, races; the chance of that match decreases as the number of donors within one's race decreases; and the number of black donors is much lower than that of white donors. This coupled with the higher rate of end stage kidney disease among blacks (34% of U.S. dialysis patients in 1988 and 63% of N.C. dialysis patients in 1990) means that if a good match is a high priority, the chance of that occurring for blacks on the waiting list is lower than that for whites.

Percentages of Black and White Dialysis and Transplant Patients

As of August 30, 1990, 63% of all dialysis patients in the state were black.[3] The percentage with hypertension as the primary diagnosis is twice as high for blacks as for whites in this state.[3]

The Southeastern Kidney Council collected data on all dialysis patients between April, 1989, and October, 1990, and for those receiving a kidney transplant from 1985 to 1989. They found that between 52% and 60% of the candidates for kidney transplantation in every age group are black, yet only 39% of kidney transplants to *state residents* in North Carolina from 1985 to 1989 were to blacks, ranging from 34% for persons under age 30 to 44% for those 50 to 64 years old. Data are not collected by the Council as to the average waiting time to transplant. When examining *all* transplants performed in the state, a slightly lower percentage, 36%, were to blacks. This may indicate that those who can afford to travel and to appear on more than one transplant list may have a better chance of receiving a kidney, or it could be that it reflects efforts to assure "best" matches given the available donor kidneys, blood types, and physician decisions about antigens.

There are other important factors involved in a transplant surgeon's decision to accept a kidney for his/her patient. First, a call from UNOS notifies a surgeon about the availability of a match for a *specific* patient on the waiting list—the surgeon cannot accept the organ and simply place it in another patient. Second, a surgeon or transplant center gets no fee and no professional "credit" for *not* doing, or withholding, a transplant. On the other hand, a surgeon would be less likely to accept a kidney if the prognosis for his/her patient is poor. The factors involved in who gets a transplant are complex.

Decisions about candidacy include many factors; they are made by the patient, the family and the health care team. The Southeastern Kidney Council is currently performing a study examining barriers to transplantation.

At The University of North Carolina Hospitals in calendar year 1990, 22 cadaver kidneys were transplanted. Three kidneys were from black donors, two from Hispanics, and 17 from whites. Eleven recipients were black (50%) and ten were white (45%). However, 60% of patients on the UNC waiting list in January, 1991 were black. The average waiting time at UNC from 1986 to 1990 was 11.7 months for blacks and 12.7 months for whites.

Additionally, UNC performed 23 living related transplants in 1990, of which only three were to blacks.[4] At Duke Medical Center in September, 1990, 53% of patients on the waiting list for a kidney were black. The average waiting time for blacks at Duke was 19 months; for whites it was 15 months.[2]

Among the three organ procurement agencies in North Carolina from July 1, 1989, until June 30, 1990, there were 92 multi-organ donors. Of these, nine were black (10%) and 81 were white (88%).[5-7]

Conclusions

There are clear differences between whites and blacks in the percentage of end stage renal disease patients receiving kidney transplants in North Carolina. There is, however, no evidence to show that racism is at work. While this possibility must not be ignored, there are other possible explanations, as we have tried to show. There are also economic and cultural circumstances at work, most notably more poverty in the black population. Poorer overall health status and often higher medical risk for transplantation, consequent delays in treatment, difficulty securing available medical opportunities and inability to pay for lifelong immunosuppressants might well influence transplant decisions and cause differences in rates.

The issue of racial differences in transplantation has received wide attention and it is being examined by many groups. The most obvious course of action in response to the current figures is to seek more information, especially about the importance of antigen matching, to find ways to reduce uncontrolled hypertension, especially among blacks, and to increase the number of black donors in the state and in the nation. ❑

Acknowledgments

We appreciate very much the help of Mr. Lloyd Jordan at Carolina Organ Procurement Agency, Mr. Fred Geiger, formerly at Baptist Hospital, Mr. Bill Faircloth at the Charlotte Organ Procurement Agency, Ms. Jenna Osborne, Executive Director of the Southeastern Kidney Council, Ms. Clara Danziger, R.N., CNN, the transplant coordinator at Memorial Hospital, and W. Ben Vernon, M.D., transplant surgeon at Duke University Medical Center.

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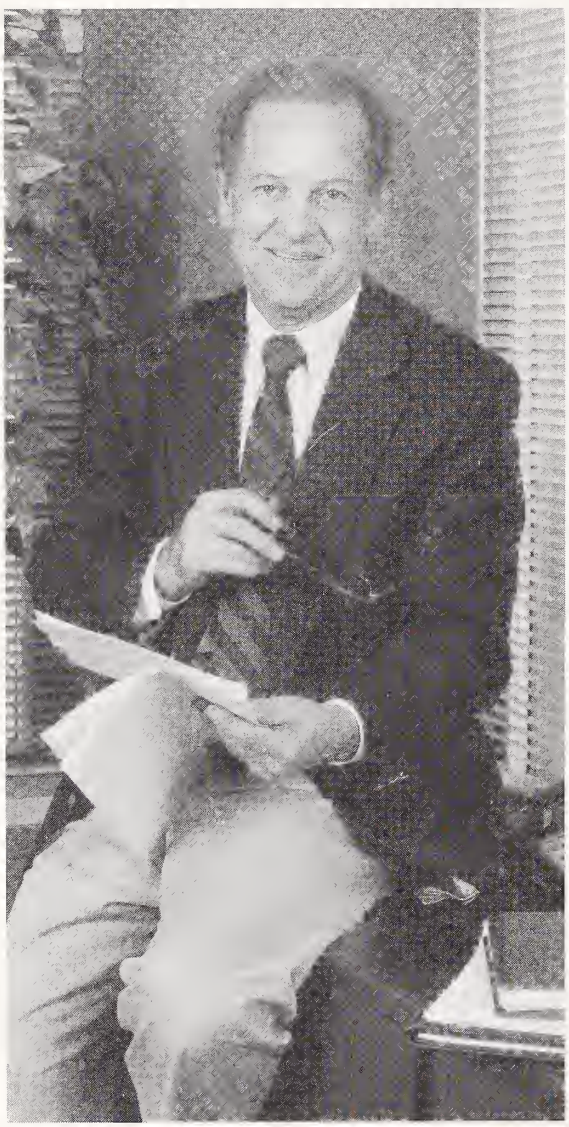
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The Distribution of Organs for Transplantation

What is Fair and Practical?

Fred Sanfilippo, M.D., Ph.D.

Treatment of end stage organ disease by transplantation is a unique form of medical practice, since it is dependent upon voluntary public donation of viable human organs that are otherwise unavailable by purchase or manufacture. Given the significant (and worsening) shortage of donor organs for suitable transplant patients, the policies and practices for organ distribution are of appropriate concern to the public and the government. Indeed, these concerns played a significant role in the creation of a federal Task Force on Organ Transplantation in 1984, as well as its final recommendations,[1] which led to the establishment of the Organ Procurement Transplant Network (OPTN) in October 1987. The OPTN, which is operated under contract by the United Network for Organ Sharing (UNOS), a private nonprofit organization, has established organ allocation policies with broad input from transplant professionals, patients, and the public. By law, all organ transplant patients are listed on the UNOS computer with appropriate immunologic and medical characteristics, so that for every donor organ available a defined algorithm is run to identify the "primary" recipient for that organ.

One of the major ongoing controversies in transplantation is defining fair and practical organ allocation algorithms, which currently differ for kidney, heart, liver, and pancreas transplants. Since the first algorithms were approved by UNOS in October 1987, they have undergone continuous review and scrutiny. This process involves initial recommendations from the UNOS Organ Procurement and Distribution Committee, which is comprised of various transplant professionals including physicians, surgeons, immunologists, and coordinators, as well as public representatives. These recommendations are then debated at public hearings and in various other UNOS committees and subcommittees (e.g., Histocompatibility, Foreign Relations, Pediatric, Scientific Advisory, Patient Affairs and others) before final review and approval by the UNOS Board of Directors, which itself is comprised of regional representatives and representatives from a variety of professional transplant and non-transplant organizations as well as patient and public groups. It is noteworthy that former North Carolina governor and kidney transplant recipient James Holshouser, Jr., serves as a public member of the UNOS Board.

As mentioned in the article by White and Stoodt in this issue of the *Journal*[2] (page 363), factors used in the current UNOS algorithm for allocating kidneys are limited to HLA match, waiting time, ABO blood group compatibility, and host presensitization, with some priority for pediatric and combined pancreas transplant recipients. In the case of heart and liver transplants, factors of medical urgency and logistics (distance) have also been used. Local variances from the approved national UNOS algorithm are allowed only in changing the relative weight of these factors, following extensive review and approval by regional and national Organ Procurement and Distribution Committees and the full UNOS Board.

The article by White and Stoodt also addresses several aspects of the recent report on kidney organ distribution in the U.S. by the Office of the Inspector General (OIG) of the Department of Health and Human Services.[3] That report raises specific concerns about three factors identified as being associated with a prolonged waiting time for kidney transplantation: the level of recipient presensitization to HLA antigens, the transplant center at which a patient is listed, and the recipient's race. These factors are representative of the three major areas of concern in determining an equitable system for organ alloca-

See also the editorial by White and Stoodt in this issue of the Journal (page 363).

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tion: medical considerations, practical factors, and equal opportunity. Each of these issues is worth examining in some detail.

Medical Considerations

Surprisingly, medical considerations in allocating organs remain controversial even today; anticipated outcome (medical risk versus benefit) is a determinant in excluding (or selecting) recipients in some cases but not others. For example, a high (but not absolute) risk of hyperacute or accelerated acute rejection essentially precludes kidney or heart transplantation into patients who are ABO blood group incompatible or have preformed anti-donor HLA antibodies.[4,5]

However, a high risk of graft loss is sometimes overlooked in other situations, such as emergency liver or heart retransplantation. Excellent anticipated outcome is also used to give priority to certain patients (e.g., for 6 HLA antigen matched kidneys), but not others (e.g., unsensitized, highly compliant, non-diabetic, young, first transplant recipients). The shortage of donor organs has led to the situation whereby transplant candidates who are in the poorest health and greatest medical urgency may receive higher priority for an organ at some centers, despite their significantly poorer anticipated outcome. Of significant concern is the fact that organs lost to rejection in high-risk patients are organs that could be used to treat other patients at lower risk who eventually die waiting for transplantation.

The OIG finding that patients presensitized to HLA antigens wait longer for kidney transplants has been well known for many years[6,7] and is to be expected if the risk of hyperacute rejection is to be minimized. Highly sensitized patients have broadly reactive anti-HLA antibodies such that few compatible donors can be identified. An enormous amount of effort and cost has been spent during the past 10 years in trying to get such patients transplanted with a reasonably low risk of rejection, and various strategies have been implemented to address this problem.[8] The current UNOS computer algorithm provides additional priority points for such patients, but it is reasonable to assume that new therapeutic agents or approaches will be needed to resolve this problem.[5] There is a feeling by some in the transplant community that too much effort has been spent on trying to get these patients transplanted, especially since the vast majority are highly sensitized because of prior graft loss, and therefore have already received a transplant. Thus, an unanswered question remains: how great an effort should be made to provide some patients a second (or third or fourth) transplant while others are awaiting their first, especially with the difference in anticipated outcome?

Practical Factors

A second major area of concern relates to the disparity in transplant waiting times due to practical factors, mostly related to local organ recovery and distribution practices. An ongoing controversy regarding local allocation is stated in two findings of the OIG report: "Organ distribution remains heavily controlled by the individual transplant center..." and "the sense of local ownership that some transplant professionals have towards organs they have procured impedes the development of an equitable and national system for the distribution of organs." Organ recovery currently is handled by government (HCFA) designated Organ Procurement Organizations (OPOs), which can be based at and serve a single transplant center or can function independently, serving more than one center. In North Carolina both types of OPOs exist: the Bowman Gray and Charlotte Memorial transplant programs are each served by their own hospital-based OPOs, whereas the programs at Duke, ECU and UNC are served by one independent OPO—the Carolina Organ Procurement Agency (COPA). This results in three separate waiting lists for transplant patients in North Carolina; one for patients to be transplanted at Bowman Gray, one for Charlotte Memorial, and a third which combines all patients at Duke, ECU and UNC.

Arguments in favor of retaining tight local control over the use and distribution of organs have been based on the presumption that preferential local use has a positive influence on local organ recovery. Counter arguments are that there is less conflict of interest in organ recovery and distribution when the OPO is independent of the institution preforming transplantation. The observed disparity in waiting times of patients at different centers is not surprising, since organ recovery rates differ significantly in different regions, and this is closely linked to local waiting times. Again, arguments run in both directions; some believe that patients living in OPO areas with high donation rates should benefit by having a shorter waiting time, while others feel that the decision of who gets an organ should not be closely tied to the local OPO organ recovery rate.

Equal Access

The third area of concern is in providing "equal access" to different patient groups. As stated in the OIG report, Congress and professional leaders expect "each person on a transplant waiting list to have an equal opportunity to receive a transplant, subject to established medical criteria." Thus, the increased waiting time for blacks appears inequitable in contrast to that for highly sensitized patients, which is clearly due to immunological (medical) reasons. Considerable attention has been focused on the reported inequity in waiting times between blacks and whites.[9] A study recently completed by UNOS,[10] examining several more factors and a longer period (October, 1987 to June, 1990) than the OIG report (October, 1987 to March, 1989), revealed that the disparity in waiting time between whites and blacks is much less when other factors are taken into account: rather than the two-fold difference reported by the OIG, the adjusted difference in waiting times of blacks vs whites was 29% (15.4 vs 11.9 months).

Nonetheless, blacks were still found to have significantly prolonged waiting times. As pointed out by White and Stoodt, this is not likely to represent a form of selection bias based on race, since race is not a variable in the UNOS organ distribution algorithm, and the UNOS computer identifies specific recipients for an organ based only on the programmed algorithm.

Two factors may help explain this racial disparity. First, a recent study by COPA[10] found that blacks were less likely than whites to get transplanted with kidneys that were made available to them, due to a higher rate of acute illness that precluded transplant surgery, recipient refusal, and inability to be located. Second, a study from Houston[11] demonstrated that blacks had a significantly higher incidence of positive crossmatches with potential donors. This was due largely to an increase in positive crossmatches of transfused black patients with potential white donors, which comprise the disproportionate majority of donors for both black and white transplant recipients. Although not examined, it is probable that this is due to sensitization to Lewis blood group antigens, which occurs most often in blacks receiving transfusions from whites; this can cause a positive lymphocyte crossmatch,[12] thus precluding transplantation.

Other questions of "equal opportunity" are perhaps even more difficult to resolve. For example, should a 55-year-old patient doing well on dialysis have the same opportunity as a child suffering from the detrimental effects of dialysis on growth and development? Should a patient who financially can afford to be on a waiting list at more than one center be allowed to have the significantly greater opportunity for transplantation than patients only listed at one center? Should a wealthy foreign national waiting in a major city with a high organ recovery rate have the same opportunity as a Native American at a reservation in a region of the country with low organ recovery?

Such issues of age, medical urgency, multiple listing and nationality have been debated at length over the past five years in formulating and modifying the UNOS distribution algorithm. However, the most important measure of whether organ distribution in the U.S. is fair and reasonable will continue to be the public's awareness of the issues and perception of equity, especially as manifested in their willingness to donate organs. ❑

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EDITORIAL

Infant Mortality in North Carolina

Arthur C. Christakos, M.D.

Much attention is being given to infant mortality by many diverse groups in North Carolina because of the appalling nature of statewide statistics in 1987 and 1988. Infant mortality rates in our state had been declining consistently since 1970, dropping from 24.1/1,000 that year to a low of 11.6/1,000 in 1986. An upward "blip" occurred n 1987 to 12.1/1,000 with another rise a year later to 12.6/1,000, the latter representing the worst experience of all the 50 states. There were more than 97,000 births in North Carolina during 1988, with 1,227 infants dying before their first birthday. These figures demonstrated a definite reversal of the trend of diminishing infant deaths during the previous two decades.

It is encouraging but by no means an indication for complacency to see some slight improvement in infant mortality in North Carolina in 1989, the last year for which we have figures.

From the Department of Obstetrics-Gynecology, Duke University Medical Center, Box 2976, Durham 27710. Dr. Christakos is Professor of Obstetrics and Gynecology and Associate Dean of Continuing Medical Education at the Duke University School of Medicine. He was commissioned by the Institute of Medicine through a grant from the Kate B. Reynolds Health Care Trust to make an inventory of the programs designed to reduce infant mortality in North Carolina. The results of his work are being published by the Institute of Medicine of North Carolina.

"...every effort must be made to prevent low birthweight babies, the condition most associated with infant mortality throughout the world....Prenatal and pediatric care are mandatory if North Carolina is to make any progress..."

In recent months, the Institute of Medicine of North Carolina, supported by a grant from the Kate B. Reynolds Health Care Trust, made an inventory of the programs designed to reduce infant mortality in North Carolina. The reason for this inventory was the need to arrive at some conclusions regarding educational efforts that could conceivably improve our infant mortality rates. The conclusions reached make it abundantly clear that the causes of infant mortality in North Carolina are multifactorial, requiring a multifaceted approach.

From an educational standpoint, every effort must be made to prevent low birthweight babies, the condition most associated with infant mortality throughout the world. This would require preconceptional health promotion and early recognition of problems with pregnancy, which can come only from an informed populace. Patients must be educated by every available means, including formal curricula in our school systems as well as electronic and print media. High-risk groups must be targeted, and health care providers must have their skills updated through continuing education programs provided by medical schools, medical societies, community hospitals and professional periodicals. Prenatal and pediatric care are mandatory if North Carolina is to make any progress in the area of infant mortality. Smoking and illicit drug use must be exposed as the culprits they are for all of our citizens, especially those in the childbearing age group.

Such educational outreach should be a combined effort involving responsible business, industrial, civic and political leaders who have been made aware of the value of prenatal care, promotion of preconceptional health and prevention of high-risk pregnancies through acceptable family planning methods that are affordable to all segments of society. In addition, there must be some concerted effort to encourage breast-feeding because of the proven positive effect this form of nutrition has on infant survival.

Who Will Take the Lead?

It makes little difference who spearheads the educational efforts for our citizens. The Institute of Medicine can certainly inform its members who come from di-

verse medically related organizations. Education could also be the cause célèbre of the Governor's Commission on Infant Mortality, whose membership comes from a more diverse group involving business people, politicians and consumers as well as representatives from the health care professions. The Governor's Commission certainly has more financial resources and some of its members are influential in the legislative process, which could have some influence on a mandatory health educational curriculum for our public school system.

Local civic organizations and volunteer groups have proven beneficial in many communities. As one student of the problem, I would certainly encourage involvement of community-spirited individuals at a local level.

The print and electronic media could be most useful in reaching the citizens through public service announcements and other such means of educating the public to good health practices. The people of North Carolina are caring and resourceful and do not deserve the dubious distinction of leading the country in infant mortality. ❑

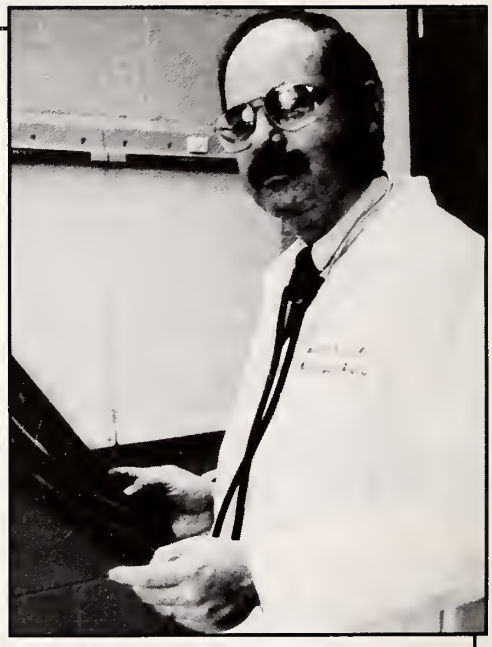
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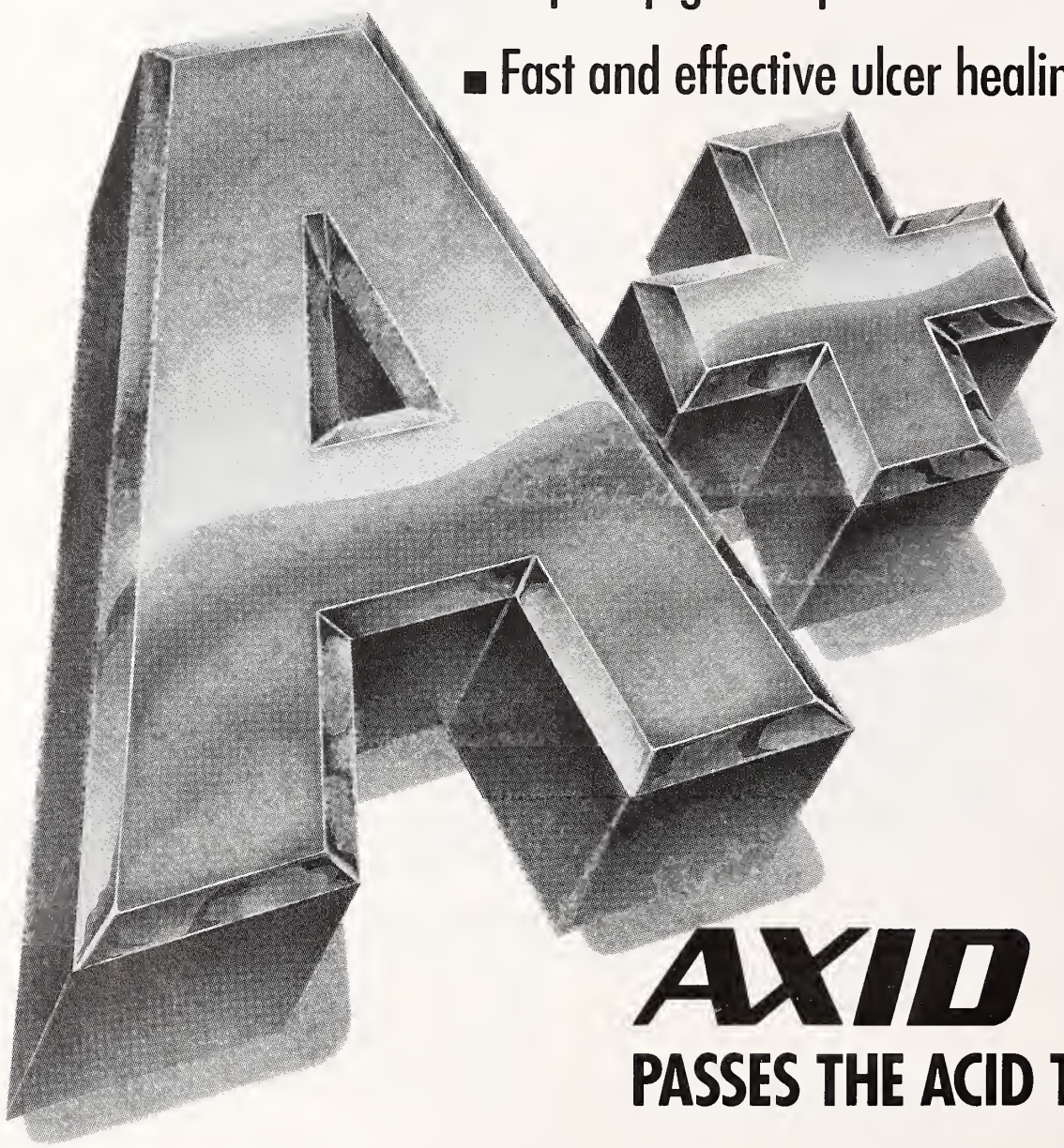
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See adjacent page for references and brief summary of prescribing information.

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Brief Summary. Consult the package insert for complete prescribing information.
Indications and Usage: 1. *Active duodenal ulcer*—for up to 8 weeks of treatment. Most patients heal within 4 weeks.

2. *Maintenance therapy*—for healed duodenal ulcer patients at a reduced dosage of 150 mg h.s. The consequences of therapy with Axid for longer than 1 year are not known.

Contraindications: Known hypersensitivity to the drug. Because cross sensitivity in this class of compounds has been observed, H_2-receptor antagonists, including Axid, should not be administered to patients with a history of hypersensitivity to other H_2-receptor antagonists.

Precautions: *General*—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Dosage should be reduced in patients with moderate to severe renal insufficiency.

3. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests—False-positive tests for urobilinogen with Multistix® may occur during therapy.

Drug Interactions—No interactions have been observed with theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450 enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increased serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility—A 2-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a 2-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a 2-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in 1 fetus, and at 50 mg/kg, it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in 1 fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers—Studies in lactating women have shown that 0.1% of an oral dose is secreted in human milk in proportion to plasma concentrations. Because of growth depression in pups reared by treated lactating rats, a decision should be made whether to discontinue nursing or the drug, taking into account the importance of the drug to the mother.

Pediatric Use—Safety and effectiveness in children have not been established.

Use in Elderly Patients—Healing rates in elderly patients were similar to those in younger age groups as were the rates of adverse events and laboratory test abnormalities. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of varying durations included almost 5,000 patients. Among the more common adverse events in domestic placebo-controlled trials of over 1,900 nizatidine patients and over 1,300 on placebo, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common with nizatidine. It was not possible to determine whether a variety of less common events were due to the drug.

Hepatic—Hepatocellular injury (elevated liver enzyme tests or alkaline phosphatase) possibly or probably related to nizatidine occurred in some patients. In some cases, there was marked elevation (>500 IU/L) in SGOT or SGPT and, in a single instance, SGPT was >2,000 IU/L. The incidence of elevated liver enzymes overall and elevations of up to 3 times the upper limit of normal, however, did not significantly differ from that in placebo patients. All abnormalities were reversible after discontinuation of Axid. Since market introduction, hepatitis and jaundice have been reported. Rare cases of cholestatic or mixed hepatocellular and cholestatic injury with jaundice have been reported with reversal of the abnormalities after discontinuation of Axid.

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in 2 individuals administered Axid and in 3 untreated subjects.

CNS—Rare cases of reversible mental confusion have been reported.

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to nizatidine. Impotence and decreased libido were reported with equal frequency by patients on nizatidine and those on placebo. Gynecomastia has been reported rarely.

Hematologic—Fatal thrombocytopenia was reported in a patient treated with nizatidine and another H_2-receptor antagonist. This patient had previously experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity—As with other H_2-receptor antagonists, rare cases of anaphylaxis following nizatidine administration have been reported. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine have been reported.

Overdosage: Overdoses of Axid have been reported rarely. If overdosage occurs, activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis does not substantially increase clearance of nizatidine due to its large volume of distribution.

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[091190]

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Report of the North Carolina Medical Society Children's Special Health Services Long-Range Planning Task Force

Page Anderson, M.D., and Robert P. Schwartz, M.D.

We urge you to read this Task Force Report carefully and to consider the challenges to our profession which it identifies. It is a strong statement of the Society's concern for ensuring the high quality of care rendered to children with special needs, as well as a strong statement in favor of preserving a source of reimbursement for medical services. It is an endorsement of a comprehensive multi-disciplinary team approach in managing the care of chronically ill or disabled children. It is also a statement of the Society's concern that services provided through the educational system be coordinated with medical services provided to the same children. Finally, it is a statement of the concerns of the Society that many children lack access to care because of providers' reluctance to participate in government-sponsored programs—particularly Medicaid. The Report defines important roles for primary care providers as well as specialists in meeting the needs of children with chronic, disabling conditions.

Page Anderson, M.D., Chairman
Children's Special Health Services
Advisory Committee

Robert P. Schwartz, M.D., Chairman
Children's Special Health Services Long-Range Planning Task Force

Background and History

The North Carolina Children's Special Health Services (formerly the Crippled Children's Program) has provided quality care for children with chronic disabling conditions since 1936. The program provides reimbursement for approximately 6,000 children with chronic medical conditions,[1] and serves another 14,000 children through a statewide network of community-based subspecialty clinics (Orthopedics, Speech and Hearing, Cardiology, Oral-Facial, Myelodysplasia, Neurology, etc.). Children's Special Health Services (CSHS) also sets quality-of-care standards and reimburses providers (physicians, therapists, hospitals, etc.) for medical services. The CSHS budget for FY 89 to 90 was $11,101,496, of which $8.8 million came from state appropriations. Approximately $2.5 million was expended for the clinic network and $7 million for reimbursement services.

Financial eligibility for services has been established annually by the General Assembly. Until the mid-1980s, the eligibility scale was approximately 40% of the federal poverty level. It is now at 100% of the federal poverty level ($13,400 for a family of four) for all outpatient services, and for inpatient services for children less than five years of age. However, the eligibility remains at 59% of the poverty level ($7,500 for a family of four) for inpatient services for children five years of age and over.

Role of the Program

The role of the program has always been to assure that children with special needs have access to a system of medical care and related health services. In the early years, the program's chief objective was to enhance the geographic distribution of care. In this regard, the program has perhaps achieved its greatest success. There were but a few orthopedists available in North Carolina in the late 1930s to provide care for children. Under program auspices, the orthopedists set up a network of circuit-riding clinics to offer care in many areas of the state. Later, the availability of reimbursement funds helped induce orthopedists to locate their practices in more rural counties. Today, orthopedists are readily accessible to all children in the state.

The same is true for speech and hearing services. Once again, through a sponsored network of clinics and reimbursement services, speech and hearing

services are well distributed across the state. Similar efforts currently are underway to effect a better distribution of cardiology, neurology, and neuromuscular services.

Beyond distribution, CSHS has played a major role in enhancing the quality of care. The strategy was to require physician supervision of and/or authorization of care and to require that such participating physicians be Board certified. The program also introduced and modeled the concept of multidisciplinary team care.

The involvement of orthopedists, physical therapists and orthotists in orthopedic clinic settings is now common practice. Likewise is the involvement of otolaryngologists, audiologists and speech pathologists in speech and hearing clinics.

The multidisciplinary approach to oral-facial restoration has become a national model of exemplary practice. Such team approaches are gaining acceptance in other care settings such as cardiology, neuromuscular, hematology and oncology clinics.

The Current Challenge

For four decades, CSHS was the major program providing a system of care for children with special needs in North Carolina. In the past five years, however, two major federal/state initiatives have had a significant impact on the ability of CSHS to provide services for children with special needs.

1 The first initiative was the federal Omnibus Budget Reconciliation Act of 1986-1987 (OBRA), which allowed the expansion of Medicaid eligibility for pregnant women and infants up to one year of age to 185% of the federal poverty level. This legislation also expanded eligibility for children up to five years of age to 100% of the poverty level with a gradual phase-in to include children up to eight years.

Effective October 1, 1990, in North Carolina, pregnant women and infants under the age of one with incomes equal to or less than 185% of the federal poverty guidelines became eligible for Medicaid; children aged one through five with family incomes equal to or less than 133% of the federal poverty guidelines, and six-year-olds with family incomes equal to or less than the federal poverty guidelines will also be eligible for Medicaid. Many children who would only have been eligible for CSHS in the past are now eligible for Medicaid. Nonetheless, the Medicaid eligibility for children over six years of age remains at 56% of the poverty level ($7,128 for a family of four).[1]

It should be noted that the CSHS budget is minuscule when compared to Medicaid. For example, the national appropriation for Medicaid in 1989 was $60 billion compared to the national appropriation for Maternal and Child Health programs (Title V) of $0.5 billion.

Ideally, the funding to expand Medicaid eligibility would have come from general revenues and new appropriations. This would have left the CSHS budget intact to finance new or expanded specialty services not reimbursed by Medicaid, and to improve access to care for the remaining uninsured population (children over six years of age who are not covered by Medicaid). However, in North Carolina, some of the money to expand Medicaid eligibility came from a budget reduction arrangement whereby funds were transferred from CSHS to Medicaid ($3.3 million). In addition, $1.6 million was transferred from CSHS to the general fund due to 1989 state fiscal difficulties. (The $1.6 million would have been used to pay bills carried over from the previous fiscal year.) This resulted in the program having to pay some of the preceding year's bills out of the following year's budget. Due to the shortfall the program was forced to stop paying for inpatient hospital care for children on April 1, 1990. Recent appropriations from the Legislature and the Governor have allowed the program to again be fully operational.

Another problem relates to standards of care. As stated previously, CSHS has played a major role in setting quality-of-care clinical guidelines for providers. There is no such intent ingrained in Medicaid policy. Medicaid law and regulations require "freedom of choice," and this is interpreted as precluding such "restrictions" as Board certification and a multidisciplinary team approach.

As an illustration, while CSHS would require that scoliosis be treated by a Board-certified orthopedist, Medicaid would not require certification. Indeed, not even orthopedic training would be required—only a medical license. Likewise, oral facial restoration under CSHS is a multidisciplinary process with clinical guidelines, while care reimbursed by Medicaid would impose no such requirement.

Other issues affecting the implementation of Medicaid expansion as a means of providing care for children with special needs might include the following:

a Medicaid enrollment. Medicaid will need to enroll all eligible children and pregnant women, or else the CSHS program may have to provide services to an enormous population, despite a reduction in funding.

b Scope of Medicaid benefits. The CSHS program will have to continue to provide some services such as medical case management, nutrition services, etc., which are not reimbursed by Medicaid.

c Provider participation. Many physicians do not participate in the Medicaid program due to low reimbursement rates, excessive paperwork, slow reimbursement, and liability concerns. Therefore, if providers are not Medicaid certified, access to care may be reduced.

d Medicaid Provider Reimbursement Rates. These must be high enough to attract and retain providers of care for children with special needs.

2 The second initiative relates to the education of handicapped children. PL 94-142 (now reaffirmed and expanded by PL 99-457) entitles children with a broad range of handicaps (physical, de-

velopmental and emotional) to a "free and appropriate" education, including "related services" such as diagnostic testing, service coordination, special therapies and other health services. Most medical care is not included.

This movement has become another example of divergent public policy. Where CSHS is focused on chronic organic disorders in indigent children, PL 94-142 and PL 99-457 created an entitlement for children with a wider range of concerns without regard to income. Many of these children have medical as well as developmental problems. Both school systems and mental health agencies have developed their own systems for providing diagnostic services and special therapies. The role of CSHS in providing standards of care and coordinating services for these children has not been determined.

Defining the CSHS Role

The recent federal amendments to Title V legislation guiding CSHS urged such programs to play prominent roles within states to develop "community-based, family-centered, coordinated care systems for children with special health care needs." Yet, as noted, the expansion of medicaid and education initiatives have diminished the influence of CSHS. One question that should be asked is, "Do we need a CSHS program? Why not let Medicaid provide these services?" The answer is that the Medicaid program provides payment for services but does not provide case management or set quality-of-care standards.

Without some changes in direction, the CSHS tradition of high-quality care may disappear altogether.

The challenge is to consider what role CSHS might play in the final decade of this century. It appears certain that its destiny is linked to its relationship to the major initiatives in Medicaid and education. The formulation of this new relationship gives rise to several questions:

Should CSHS play a formal role in providing medical case management[2] services and establishing standards of care for children with special needs supported by Medicaid?

As discussed earlier, the "freedom of choice" aspects of Medicaid law present obstacles in this regard. Several states have implemented an array of mechanisms which do indeed enhance the role of CSHS. In all cases, however, the strong support of the medical community is needed, since the initiation of certain clinical guidelines and procedures may limit the access of providers to Medicaid reimbursement.

Should it not be the right of all children with special needs in North Carolina to receive appropriate medical care? Should public funding be available to support services for children from low-income families?

With North Carolina's high infant mortality rate and the increasing number of low birthweight and premature infants, our state will be required to provide services to an increasing number of survivors with special needs. To meet this responsibility, we need to ensure the long range financial stability of services for children with special needs.

How can service coordination[3] help families of children with special needs?

A system is needed to provide service coordination for families of children with special needs. In many cases, families must seek out help on their own in an increasingly complex system of providers. There are multiple "service coordinators" in the hospital, specialty clinics, school, Health Department, Social Services, and other community agencies.

Under PL 99-457, service coordination is a mandated service which should be made available for all children with special health needs (birth to age five) and their families. The Division of Maternal and Child Health has been given lead agency responsibility for developing a statewide delivery system for service coordination. Service coordination provides support for families in caring for their young children and in meeting medical, developmental, psychosocial and educational needs. An individual service coordinator assigned to the family to coordinate all services would be a valuable resource.

Should CSHS offer itself as a major mechanism to facilitate the medical care of children receiving special education services?

This would require the elimination of clinical and financial eligibility criteria for these special children. It should be noted that this would involve a major expansion in outpatient service activity but very little in inpatient care.

Policy Recommendations

The following recommendations were lifted from the full report.

1 Interagency agreement and provider arrangements

a Establish an agreement between the Division of Medical Assistance (Medicaid) and CSHS for CSHS to be a provider of medical services. Medicaid would reimburse CSHS for medical services inclusive of medical case management for children covered by Medicaid. Individual providers (physicians, therapists, etc.) would be reimbursed for services by CSHS, and CSHS would then bill Medicaid internally for payment. This would continue the long-standing relationship between CSHS and providers in North Carolina.

b Strengthen the interagency relationship between the Division of Medical Assistance and CSHS, and designate individuals to coordinate services and reimbursement arrangements.

2 Service coordination

a Develop a program to train service coordinators to ensure the provision of family-centered care for all children with special needs and their families.

b Facilitate the training of parents of children with special needs to be service coordinators.

c Publicize the Family Support Net-

3 Provider participation

a Encourage physicians to be primary care providers for children with special needs.

b Encourage more provider participation in Early Periodic Screening, Diagnosis and Treatment Program (EPSDT) so that children identified with complex medical needs can be referred to appropriate evaluation and treatment services.

c Encourage CSHS to strengthen its relationship with primary care physicians.

d Seek competitive rates of reimbursement for providers.

e Streamline the reimbursement process.

4 Standards of care and quality assurance

a Support the establishment of an agreement between CSHS and the Division of Medical Assistance to channel Medicaid children with complex medical problems to designated CSHS providers. Qualified providers of comprehensive services such as multidiscipline clinics and Board-certified specialists and subspecialists would be *recommended*. Families of Medicaid eligible children would have the right to choose other providers.

b Utilize existing CSHS quality-of-care guidelines to ensure that children whose care is covered by Medicaid will receive the same level of care as currently available through CSHS. The CSHS Advisory Committee of the North Carolina Medical Society provides guidance and recommendations to CSHS on clinical guidelines. Further efforts to enhance quality of care will include input from primary care physicians, specialists and parent organizations.

5 Access to care

a Encourage the Division of Social Services and CSHS to develop processes so that applications for both Medicaid and CSHS might be taken at the site of care.

b Promote the development of mechanisms to facilitate entry into CSHS, Medicaid and Supplemental Security Income (SSI) for children,[4] including an eligibility application common to all relevant agencies.

c Encourage physicians to be both Medicaid and CSHS providers of care for children with special health care needs.

6 Fiscal stability of services for children with special needs

a Develop a mechanism for Medicaid to reimburse CSHS for medical services. (See section on Interagency Agreement and Provider Arrangements.)

b Seek funding for CSHS to continue to provide inpatient and outpatient medical services up to the federal poverty level as a net income until their twenty-first birthday for children with special needs who do not quality for Medicaid and who otherwise would "fall between the cracks."

c Seek new funds to enhance the CSHS service delivery system, including expanded clinic services, medical case management, and service coordination.[5] Suggested sources: increased or new state appropriations; seek county appropriations; private donations; special state funds (e.g., hospital tax, check-off on state income tax form, cigarette tax, lottery); grants.

d Work to expand Medicaid eligibility to 100% of the poverty level for children with special needs, age 7 to 21 years (only children 0 through 6 years are now eligible at this income level).

e Seek to maintain or expand current state appropriation until program requirements are satisfied. Seek legislative and administrative counsel to prevent future budget shortfalls.

f Seek legislative authority for CSHS to carry forward funds to honor existing obligations for a period of at least six months after the end of a fiscal year. This might prevent a shortfall such as occurred in April, 1990, resulting in a reduction in services.

7 Expanded role for CSHS in the implementation of the Education of the Handicapped Act (PL 94-142 and PL 99-457)

a Develop a relationship and agreement between CSHS, the Department of Public Instruction, and Mental Health for CSHS to be a provider of medical case management and coordinate medical services for children with special health needs.

b Study the feasibility of CSHS being the provider, contractor and broker of services to assure that the medical and related health care needs of these children are met.

c Obtain additional revenues and the support of medical, educational, and parent organizations for CSHS to assume its expanded role.

d Involve parent advocate groups in developing a family-centered, community-based, coordinated care system. ❑

Acknowledgments

The following publication was used as a resource document: "State Strategies for Financing Medicaid Expansions to Meet the Needs of Children and Pregnant Women," by Harriette B. Fox, Ann Greaney and Rebecca Weader. August, 1989; Fox Health Policy Consultants, Inc., 1140 Connecticut Avenue, NW, Suite 1205, Washington, DC 20036.

Information concerning SSI for children was provided by Karen Boone and Beth Clark, SSI Representatives, Social Security Administration, Department of Health and Human Services, Raleigh, NC, August 20, 1990.

Consultants: Steve A. Freedman, Ph.D., Director, Institute for Child Health Policy, University. of Florida, Gainesville, FL; Merle McPherson, M.D., Director, Division of Services for Children with Special Needs, Maternal and Child Health Bureau, Washington, DC.

Endnotes

1 OBRA 1990 mandates a year-by-year phase-in of Medicaid coverage for children born after September 30, 1983, up to

North Carolina Medical Society CSHS Long-Range Planning Task Force

The Task Force included physicians representing most of the specialties involved in CSHS; representatives of the Medicaid Program, of the Department of Public Instruction, and of the Department of Environment, Health and Natural Resources; parents of CSHS children; legislators; and others interested in the special health care needs of North Carolina children.

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Olson Huff, M.D., Asheville
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Andrew L. Koman, M.D., Winston-Salem
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age 19. The income level for the phase-in is 100% of poverty level. Coverage will be added for children age seven years on July 1, 1991, and age eight years on October 1, 1991. Thereafter, the age will be increased each October 1 until children who are age 18, but not 19, are covered. Medicaid coverage of children age 19 to 21 will be optional to states.

2 Medical case management refers to the designation of a provider who will assume responsibility for primary care for the child, referrals to specialized care, and—if necessary—participation in the development of individualized education plans for children receiving special education services.

3 Service coordination refers to the designation of a professional—usually a nurse or social worker—who assists the family in identifying needs and facilitates access to needed services.

4 SSI for children is a federal program which provides a monthly benefit check. In order to qualify, a child must have a significant physical or mental impairment, having lasted or expected to last 12 continuous months. Family income and resources are also considered in determining eligibility for SSI benefits. Financial eligibility is very low ($2,420 for a family of four). A child that is eligible for SSI may be eligible for Medicaid; however, the family must apply separately for Medicaid through the local Social Services agency.

5 Child Service Coordination became a reimbursable service for children who are eligible for Medicaid through the Division of Medical Assistance effective July 1, 1990. Funding is needed to provide service coordination for children with special needs who are not eligible for Medicaid.



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Health Watch

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Nutrition

MEN AND CHRONIC DISEASE: REDUCING THE RISK THROUGH NUTRITION

Arnette Cowan, MS, RD

Chronic diseases are a major cause of death and disability for North Carolina's men. In fact, heart disease and cancer are the leading causes of death while stroke continues to be a major health threat of men in this state. The good news is that the risk of developing these diseases can be significantly reduced by making simple changes in eating and lifestyle habits.

How big is the problem?

In 1990 18,537 men died from heart disease, cancer or stroke in North Carolina. Of these deaths, 9,484 were attributed to heart disease, 7,241 were attributed to cancer and 1,812 were attributed to stroke—all higher than the national average. But perhaps most disturbing of all is the fact that a great deal of these deaths are preventable.

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Who is at risk?

Men with a higher number of risk factors are more likely to develop a chronic disease. Risk factors are characteristics or habits that increase the likelihood of developing a disease. Cigarette smoking, high blood pressure, high blood cholesterol, being overweight and physical inactivity are risk factors that can be changed. Risk factors such as being a male and heredity cannot be changed. As a group, men are more likely to be exposed to risk factors such as cigarette smoking, hypertension and alcohol consumption. Men also are less likely to use beneficial health services.

What can men do?

The intent of this article is to focus on some of the nutrition-related risk factors that can be changed. Nutrition plays a very important role in reducing the risk of developing or dying from a chronic disease. The following text explains how improved eating and living habits can reduce the chances of developing chronic and potentially fatal diseases.

Know your cholesterol number

In addition to cigarette smoking and high blood pressure, high blood cholesterol (greater than 200 mg/dl) is one of the three major risk factors for heart disease that can be changed. The risk of heart disease increases as the blood cholesterol level increases. In North Carolina, the death rate from heart disease is higher than the national average for males. Although women tend to have higher blood cholesterol levels than men, the death rate is higher for men. The female hormone, estrogen, seems to act as a protective factor for women. Therefore, being male is a heart disease risk factor independent of other risk factors.

The Division of Adult Health, Department of Environment, Health, and Natural Resources conducted a survey on the knowledge, practices and attitudes related to dietary fat of North Carolinians. One section of the "Dietary Fat" survey asked about the respondent's knowledge of cholesterol. Only 60 percent of North Carolina men have ever had their cholesterol checked and 84 percent of those reported having had it checked during the past year. Twenty-eight percent said they were told they have a high cholesterol level. When asked, however, 50% of the men did not know that less than 200mg/dl is the recommended level. Fifty percent of the men responding to the survey did not know or were unsure how to lower their blood cholesterol.

It is always important to ask a doctor what your cholesterol level is and if that number is within the recommended range. If your blood cholesterol is not within the recommended range, your doctor may want to do a more complete cholesterol profile. This profile will determine your low density lipoprotein, or bad cholesterol, and your high density lipoprotein, or good cholesterol. Low density lipoprotein, or LDL, carries most of the cholesterol in the blood. If not removed from the blood, LDL cholesterol and fat can build up in the arteries contributing to heart disease. High density lipoprotein, or HDL, helps remove cholesterol from the blood, preventing its accumulation in the walls of the arteries. After evaluating your cholesterol profile and other risk factors, your doctor will determine whether you need a specific treatment program.

In addition to knowing your blood cholesterol number, it is also important to know what steps to take to lower it or to maintain a level within the normal range of 200mg/dl or less. Blood cholesterol levels can usually be reduced by dietary changes alone. These changes usually include reducing dietary fat.



Decrease dietary fat

A lot of emphasis has been placed on fat, with good reason. Dietary fat plays a major role in the development of heart disease, colon and prostate cancer, and diabetes. Saturated fat (fat found in animal products) has been connected to heart disease, while total fat consumption has been implicated in other diseases, such as cancer. The data from the survey suggest that North Carolina men may have certain eating practices that put them at risk for developing heart disease and colon and prostate cancers. Listed below are some of the important findings:

- North Carolina men are more likely than women to fry chicken, and men prefer the taste of fried foods more than women do. While occasionally eating fried foods is all right, doing so on a regular basis can be harmful. This practice adds calories and fat to your diet. Baking or broiling chicken and other meats will decrease fat and calories.

- North Carolina men are more likely than women to eat meat and less likely to substitute beans for meat. With careful planning, beans such as pinto beans can be substituted into an eating plan without sacrificing food value. This may decrease the amount of fat, especially if fat is not added as seasoning. If you prefer meat, eating the leaner cuts of meat such as lean ground beef, loin and round cuts are good choices. Also, removing the skin and fat from chicken and trimming the fat from beef and pork will decrease fat consumption.

- North Carolina men are more likely than women to drink whole milk. Milk and other dairy products are excellent sources of calcium and protein. Unfortunately, whole milk also is an excellent source of fat, which may increase blood cholesterol levels. To cut down on the risk, drink low-fat or skim milk and eat low-fat cheeses such as mozzarella and cottage cheese. You will still get plenty of calcium and protein, but not as much fat.

Maintain a healthy weight

Having excess body fat has been associated with cancer, diabetes, heart disease and high blood pressure. Not only does being overweight contribute to cardiovascular disease, it is also associated with other risk factors. Overweight people are more likely to have high blood pressure, high blood cholesterol and diabetes. It is estimated that 34 million adults are considered to have excess body fat (above 120 percent of ideal weight). Behavioral Risk Factor Surveillance System (BRFSS) data indicate that 26 percent of North Carolina men have excess body fat.

If you are overweight, losing weight is a good idea. While no one plan for losing weight is best for everyone there are some general guidelines that should be followed:

- Eat moderate portions of food from all the major food groups.
- If you are not physically active, regular exercise may help you lose weight and keep it off.
- Do not try to lose weight too fast. A steady loss of one to two pounds a week until you reach your goal is generally safe.
- Avoid crash diets that severely restrict the variety of foods or the calories you can have. Most people who go on crash diets gain the weight back within two years.
- Consult with a nutritionist to help you plan a healthful eating plan.

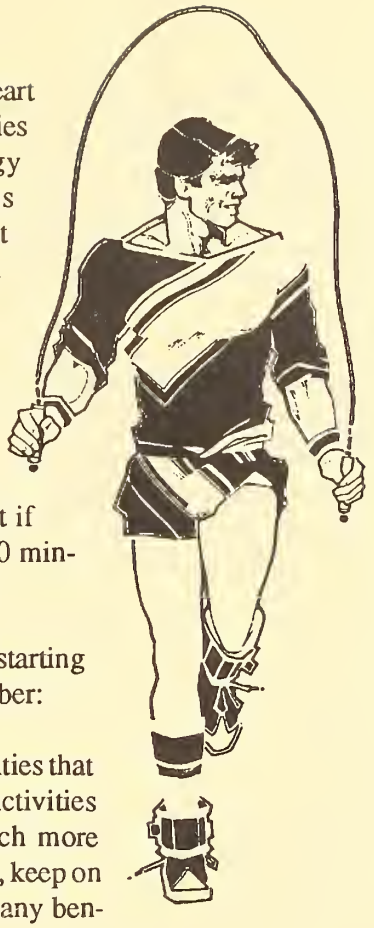
HEIGHT		WEIGHT (pounds)		
Feet	Inches	Sm. Frame	Med. Frame	Lg. Frame
5	1	123-129	126-136	133-145
5	2	125-131	128-138	135-148
5	3	127-133	130-140	137-151
5	4	129-135	132-143	139-155
5	5	131-137	134-146	141-159
5	6	133-140	137-149	144-163
5	7	135-143	140-152	147-167
5	8	137-146	143-155	150-171
5	9	139-149	146-158	153-175
5	10	141-152	149-161	156-179
5	11	144-155	152-165	159-183
6	0	147-159	155-169	163-187
6	1	150-163	159-173	167-192
6	2	153-167	162-177	171-197
6	3	157-171	166-182	176-202

Exercise

The benefits of exercise cannot be stressed enough. Regular exercise may help you lose weight, control high blood pressure, increase the high density lipoprotein (good cholesterol), improve the condition of your heart and lungs and help control diabetes. Not only does exercise help in losing weight, it also helps maintain a healthy weight. BRFSS data suggest that only 28 percent of North Carolina men exercise regularly.

Two different types of activities that may help you achieve these benefits:

1. Exercises such as jogging, jumping rope and stationary cycling can condition the heart and lungs, burn off calories and increase your energy level. These exercises should be done for at least 20 minutes, three times a week.



2. Exercises such as bicycling, basketball, racquetball, swimming, singles tennis and walking can condition the heart if done briskly for at least 30 minutes, three times a week.

If you are interested in starting an exercise program, remember:

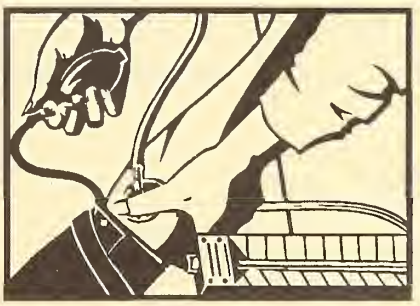
- Choose an activity or activities that you enjoy. By choosing activities you like, you will be much more likely to exercise regularly, keep on exercising and enjoy its many benefits.
- Consult your doctor. If you are more than 60 years old and do not routinely exercise, or if you have any physical condition such as heart disease or diabetes, you should consult your doctor before engaging in an exercise program.
- Start slowly. You will be able to increase your exercise time or pace as your body becomes more fit.

Know your blood pressure number

High blood pressure can cause a stroke, heart attack or kidney failure. High blood pressure can be controlled with proper treatment and individual efforts to reduce risk factors. In the BRFSS data, 16 percent of North Carolina's men report that they have been told by a physician that they have hypertension. However, many men do not know what their blood pressure number is or that a blood pressure number of 140/90 or above is too high.

You have a greater chance of getting high blood pressure if you:

- are black;
- are a blood relative of someone with high blood pressure;
- are overweight;
- are male;
- have diabetes.



It is important to ask your doctor what your blood pressure is and if that number is too high. If it is, losing weight, exercising on a regular basis, controlling diabetes if you have it, decreasing sodium intake, not smoking, limiting alcohol consumption and taking medications prescribed by your doctor may help control your blood pressure.

Decrease sodium intake

Excessive sodium intake has been associated with hypertension in some people. Table salt contains sodium and chloride. Both are essential in the diet. However, most North Carolinian males eat more salt and sodium than they need.

To decrease the amount of salt and sodium you consume:

- Use less salt during cooking and at the table.
- Use herbs, spices, and lemon juice instead of salt to flavor food.
- Eat fewer salty foods, such as chips, canned soups, hot dogs, salt pork, luncheon meats, sausage, ketchup and pickles.
- Eat more fresh fruits and vegetables.

Following these few suggestions may help you reduce your risks for developing cancer, stroke and heart disease. It is always important, however, to consult with and follow your doctor's advice.

Although some risk factors such as gender or heredity cannot be changed, it is important to change those that can. Additional information about risk factors and help to reduce these risks may be obtained from your county health department.

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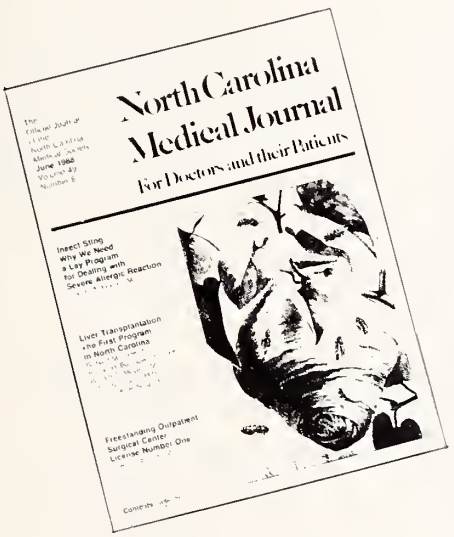
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Che Gelida Manina

Fentanyl Intoxication

Ronald B. Mack, M.D.

You have told me before that you do not like opera. But have you ever really sat down and listened to the music? Forget the stories, they are much the same, at least the popular Italian operas are—boy meets girl, boy loses girl, boy or girl dies and while dying sings some of the most beautiful melodies devised by man. Aren't you tired of rap, Madonna, and androgenous caterwauling cacophonies?

For instance, in La Boheme, Rudolfo, a poor struggling poet in Paris, meets a poor struggling seamstress, Mimi. Mimi knocks on his door because her candle has gone out. He lights her candle, gets excited and then everyone's candle goes out. He grabs her hand (in those days that was a bold move and did not constitute sexual harassment) and sings the aria *Che Gelida Manina*[1] ("thy tiny hand is frozen"). If this opera were written today, Rudolfo would probably exclaim *"che gelida culo"* ("thy ample tush is frozen"). What a high!! Today many people seek other highs—like "China White" and "Tango and Cash," derivatives of fentanyl.

Fentanyl, when used legitimately by anesthesiologists, is a useful medication. It was introduced into the United States in 1968 as an intravenous synthetic[2] anesthetic/analgesic. It is currently a big deal in the OR—used as a preanesthetic medication, as a primary anesthetic, and as a postsurgical anesthetic. At this time it is also being used in the form of a transdermal patch. This patch contains fentanyl in such a way that the absorption of the drug is rate controlled. It offers reliable drug release, acceptable safety, and the ability to control postoperative pain.[3-5]

I shudder when I think of the possibility of this form of the medication becoming available on the "street." In transdermal form, this opioid analogue would be highly desirable to any addict and could create many new addicts as well; it avoids intravenous use and thus eliminates telltale "tracks" (needle marks) and reduces the risk of AIDS.

Fentanyl is a specific mu-opiate receptor agonist that is 200 times as potent as morphine.[2,6,7] It has a rapid onset but only acts for a short period of time. The drug is very lipophilic, resulting in rapid penetration of the central nervous system. The onset of subjective effects is within 90 seconds of intravenous administration. The plasma concentration of this drug rapidly declines as it is metabolized and distributed into the tissues.[7] Repeated doses lead to accumulation and subsequent respiratory depressant effect.

Fentanyl is chemically related to merpidine, with actions similar to morphine.[6] For example, after an injection of 100 mg. intravenously, the effect begins very rapidly, although maximal analgesia and respiratory depression may not occur for several minutes, and the average duration of action is 30 to 60 minutes. The drug is usually administered intravenously, but the intramuscular route is used for premedication and postoperative pain relief as well as for maintenance of anesthesia.

Pharmacokinetics

A few words about fentanyl's pharmacokinetics might be helpful here, at least I hope so. (If you fall asleep here I will never forgive you.) Opiates, both natural and synthetic, cause a number of clinical effects that are also induced by endorphins—endogenous morphine-like substances—as well as substances in related groups acting on specific neurons.[2] In these neurons, five receptors may be present, to wit: mu, kappa, sigma, delta and epsilon.

The receptors mu, kappa and sigma are thought to be associated with opioid action. When stimulated, each of these three receptor sites appears to be associated with a series of responses. Fentanyl, it is currently believed, is the only opioid that works specifically on only one receptor, the mu. (This receptor is a specific location on every nerve cell in the human body.) The clinical effects induced at

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receptor site mu by fentanyl include supraspinal anesthesia, respiratory depression, miosis, euphoria, and physical dependence. Fentanyl is thought to travel directly to the brain after intravenous administration, where it begins its work on the mu receptor. Now, at least, we can understand why someone would purposely get interfaced with fentanyl—it makes you feel good.

More data to ponder: fentanyl is highly protein bound, 80% to 86%, and has a volume of distribution (V_D) of 4 l/kg. It is metabolized by the liver into despropionylfentanyl and norfentanyl. This drug is eliminated in the urine over a three- to four-day period. The elimination half-life is two to four hours.[8]

"Designer Drugs"

Why all the fuss about fentanyl, obviously a fairly popular drug in legal use in our country? I'll tell you why!! Fentanyl analogues are being abused and are part of the so called "designer drugs" epidemic. "Designer drugs" are produced in illegal laboratories; the "evil chemists" who manufacture them attempt to outwit the law by creating substances that are not yet controlled by the drug enforcement agencies. These clandestine laboratories create non-controlled drugs of abuse by altering the chemical structure of a compound and putting the product out on the street without adequate safety trials.

In the summer of 1980 the first "street synthesized" opioid, a fentanyl derivative, was released to an unsuspecting drug-abusing segment of the population. This product was known as "China White," alpha-methylfentanyl, and caused many deaths.[9] The product is approximately 200 times as potent as morphine.[10] This drug is easily synthesized using readily available chemicals as precursors. This homologue of fentanyl is so powerful that identification in biological specimens is difficult; effective doses are in the range of 0.01 to 0.05 mg.

After 1985, deaths due to "China White" declined. This was primarily a problem west of the Rocky Mountains. In 1988, however, the drug surfaced in Pennsylvania and was responsible for many drug overdose deaths.

In February 1991, a "new drug" was thought to be responsible for illness and at least 28 deaths in heroin users in the Northwest. This new drug, known on the streets as "Tango and Cash," was yet another analogue of fentanyl.[11] The "designer" fentanyls have been sold in powder form, and the primary route of administration, among abusers, has been intravenous.[12] More recent data suggest that two other means of ingestion of these drugs are becoming more popular—smoking and insufflation ("sniffing")—probably in an attempt by the user to avoid the transmission of diseases, such as AIDS.

There are, of course, several legal derivatives of fentanyl, including sufentanyl (2,000 to 4,000 times as potent as morphine), alfentanyl (20 to 30 times as potent as morphine), lofentanyl (6,000 times as potent as morphine) and carfentanyl (3,200 times as potent as morphine).[2] There is, of course, my invention, garlicanyl—10 times as potent as garlic. My invention is to be used on Italian food served in my area of the South, where the pasta is not al dente and the sauces all taste like red-eye gravy instead of marinara. (Beware of the Italian restaurant where the cook's name is Billy-Bob.)

Three illicit analogues of fentanyl are now considered Schedule I Drugs under the Controlled Substances Act: methylfentanyl, p-Flourofentanyl, and 3-methylfentanyl (7,000 times as potent as morphine). The drugs included under Schedule I are those that have the highest potential for abuse and have no recognized use except for experimental purposes. There are probably new analogues being discovered even as we speak.

People who abuse "designer drug" fentanyl derivatives do so to get "high," to obtain a singular sensation as they would following morphine, heroin, demerol, codeine, methadone, etc. An acute overdose of these fentanyl analogues can produce sudden death, when administered intravenously, because of the power of even very small amounts of the drug; the victim dies so quickly that the needle may still be present in his or her arm.

Treatment for Fentanyl Analogue Overdose

If the patient is still alive when you are called upon to manage his or her problem, you probably will see evidence of the classic narcotic triad—miosis, respiratory depression, and coma. The miosis may be absent and mydriasis present instead, if the patient is suffering from severe acidosis, profound hypoxia, and marked respiratory depression. You could expect to find hypotension as well.[8]

The treatment is rather emergent in such an overdose encounter, and, fortunately, it is possible to salvage the patient by using the antidote naloxone (Narcan®). Large doses may be necessary for these unfortunates. Do not forget that routine toxicology screens may not detect these drugs. Do not be afraid to use naloxone. Single doses of up to 24 mg have been given without adverse effect.[13]

Begin with a dose of 0.4 to 2.0 mg IV and repeat prn to reverse adverse signs and symptoms.[8] If there is no response after 10 mg of naloxone has been given, you may need to reassess the original diagnosis. Intravenous naloxone can have a half-life as short as 60 minutes. Needless to say, the vital signs should be supported and monitored.

In the last act of La Boheme, our heroine, Mimi, estranged from Rudolfo, returns, and is obviously dying. No supportive therapy or monitors for her—she had no money, no Medicaid, no insurance. She again complains of being cold, this time not only her hands and her tush, and she falls asleep and dies. Rudolfo is disconsolate and as he faces the dead body of the girl he loved with such passion, his friends exclaim: *"Coraggio, Coraggio,"* at which point our hero exhorts his colleagues with this beautiful tenor aria—*"Mi sono sentito imbarazzato quando mi*

sono accorto che avevo la bottega aperta" ("I was embarrassed when I realized I had my fly open"). Curtain down please. ❑

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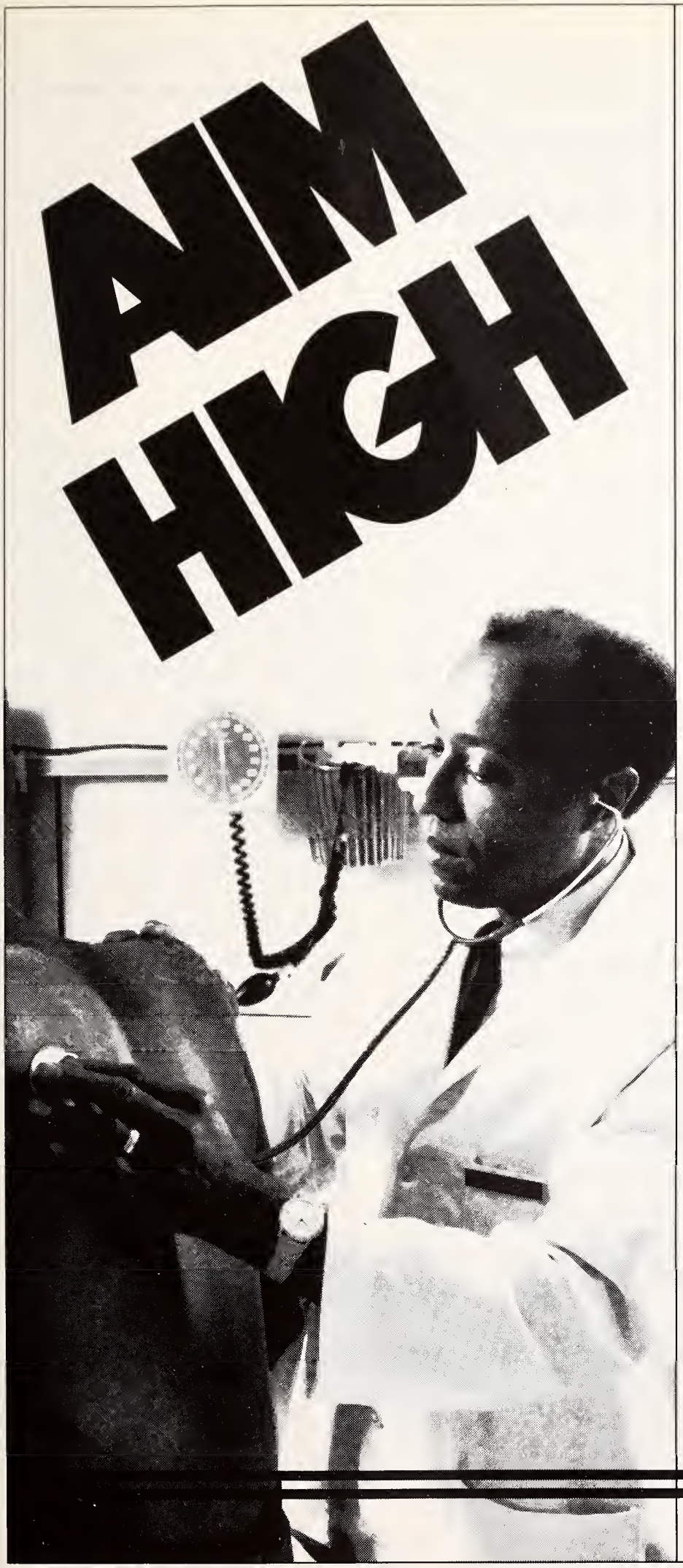
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Futility: Newer Guidelines to Endorse with Caution

Edward V. Spudis, M.D.

Medical care should be withdrawn or withheld in special situations often described as futile. Such suspension of care is commonly considered in two clinical situations that have stimulated widespread public interest and apprehension.[1]

Withholding Resuscitation

Physicians sometimes reluctantly initiate cardiopulmonary resuscitation (CPR) because of local traditions or rigid hospital protocols. CPR has become part of ordinary care in all American hospitals and many long-term care facilities unless the attending physician has written a do-not-resuscitate order. CPR, however, may lead to prolonged dying. This raises the question of who is ultimately responsible for designing health care.[2-4] CPR has been initiated perfunctorily in recent years in many cases where a satisfactory outcome could not reasonably be expected. Patients with metastatic cancer and advanced age and those who arrest outside the hospital are seldom pleased with the results.[5] Moreover, CPR has also achieved symbolic status in many communities so that a decrease in utilization would need to be accompanied by considerable public re-education. There is always danger of inappropriate paternalism. However, physicians routinely select one sophisticated plan of treatment from batteries of possible therapies without explaining the advantages or risks of each program. Archaic treatment methods are not explained to the patient or family. Discussions of irrelevant options would be unlikely to enhance confidence.

Every thoughtful physician and patient would agree that futile CPRs should be eliminated. Our criteria for futility are still evolving. Reliable data based on age and patient surroundings are accumulating.[6] One popular advance medical directive by the Emanuels uses the phrase, "... no known hope," as a guide to withdrawing care.[7] "No hope" must be translated by the attending. Many physician groups have criticized the concept of partial codes, slow codes, mechanical-non-chemical codes, etc., while recognizing that each resuscitation effort is unique. Both the attending physician and the patient might agree, for instance, that resuscitation is to include every kind of effort except intubation. There has been little discussion in hospital regulations and right-to-die guidelines as to the number of chest compressions, the proper number of attempted cardioversions, etc.[8] Medications, routes and amounts are left to the discretion of those at the scene. CPR is a technical production based entirely on the practices of the most experienced leader attending.

It is impossible for hospital administrators or CPR committees to revise protocols for each subtle change in technique. Hospitals and nursing homes accepting Medicare funds will be required to explain their resuscitation policy in writing beginning in November 1991. To satisfy this requirement, hospital admitting offices and emergency departments could post the key features of a CPR policy using lay language. A preamble might discuss the value of individualized advance medical directives and living wills, and explain that the policy of the institution is based on the seemingly universal premise that no one wants death with indignity. Therefore: "When circumstances indicate that cardiopulmonary resuscitation would not lead to a useful recovery, it will not be initiated. If you have questions please ask." Such a blatant policy may contradict some state regulations requiring written signatures to cancel CPR efforts. However, it is impossible to discuss with the surrogates each stage of an ongoing CPR. Moreover, attending physicians may interrupt a CPR at any moment without consulting anyone. A posted institutional policy would only reduce the number of inappropriate resuscitations, so-called Hollywood CPRs, that are initiated.

Declaring such a policy in 1991 may seem bold to the public even though such an educational effort has been mandated by Medicare regulations. Nevertheless, the attending physician has no ethical obligation to offer useless therapy, and

From Forsyth Memorial Hospital, Electrophysiology Laboratory, Box 25187, Winston-Salem 27114.

will be increasing legal jeopardy if the useless CPR does result in partial recovery or a persistent vegetative state (PVS).[9-12] The basic question is: who will design medical care? Surrogates may want a magnetic scan of the head repeated because no contrast agent was used.

If relatives or surrogates request CPR that the attending cannot endorse, an obvious, partial solution would be to refer the problem to an ethics committee or transfer the patient.

Withholding Nutrition

Emergency CPR decisions are often wrenching and brief but withdrawing nutrition or mechanical ventilation in the vegetative states can be an agonizing consideration over many weeks. Frequently right-to-die laws and living wills apply only to patients who are terminal and irreversible. The more difficult withdrawal decisions concern non-terminal patients who still respond variably to stimulation. Relatives often want to discontinue nutrition before the attending physician can agree.

Recently two distinguished American panels offered new guidelines for the declaration of PVS.[10-11] If PVS is diagnosed, the withdrawal of care—except for personal cleanliness, may be officially considered. Withdrawal is never required or advised in any way by these experts; we are simply under "no obligation" to provide care. No authoritarian medical group has yet specified the circumstances under which nutrition *should* be or *ought* to be withdrawn.

Our clinical habits are such that we are often most impressed by lost functions, e.g., fixed pupils. Therefore, it may be useful to publish a checklist of important clinical functions that may be preserved in PVS. There is a basic similarity between the various published criteria for PVS but not 100% agreement after 19 years.[13] If the attending physician and the family or surrogates believe it is proper to discontinue all medical care, and there are compelling reasons to believe that the patient would also agree, then nothing on the following list would categorically prohibit the official consideration of such withdrawal.

1 Pupils may react to light; lids may open and close.
2 An air stream may evoke blinks.
3 Eyes may dart toward a noise or moving object.[11]
4 The patient may withdraw from noxious stimuli.
5 Unintelligible grunts or screams may occur and some recognizable words may be used inappropriately. There may be unpredictable smiles and an "alert demeanor."[11]
6 Nystagmus may be elicited by the usual methods.
7 There may be chronic chewing or teeth clamping—not sophisticated tasting movements. (The Academy of Neurology, however, uses the phrasing, "the capacity to chew and swallow in a normal manner is lost ... "[10])
8 Abrupt stiffening movements may be seen and even efforts to sit up, so-called Lazarus movements.[14,15]
9 The patient may breathe without assistance.

The Technologic Signatures of Futility

In fact all chemical, radiologic, magnetic, proton, and electrical testing may be normal. Two evolving techniques may provide some guidance. Positron emission studies may show decreased metabolic activity in widespread cortical regions.[16] Preserved activity would suggest a potential for improvement.

The other is a difficult-to-standardize electrophysiologic test that measures long-latency evoked responses, often called cognitive responses. If there is an actual loss of "... learning, memory and self awareness" in PVS patients, then cerebral potentials evoked by anticipation of a stimulus should not be present.[11,17] A few PVS patients might produce cognitive responses just as a few brain-injured patients in deep coma produce them.[18] Such potentials are associated with improved outcome in post-traumatic injuries, so that PVS patients with preserved cognitive evoked responses would be in a special pathetic subcategory of the locked-in syndrome.[19]

The Timing of Futility

A decision to withhold resuscitation is often justified. Withholding nutrition and fluids is always a quantum step that reverses what has been presented as the best of medical care. Physicians have felt obligated to continue any care that might restore useful life, variously defined as restored cognition, or self-awareness, or sapience, or the return of cortically-motivated behavior.[20] The AMA Council states that the "odds of recovery are less than one in 1,000" in PVS, using their criteria, so that "... prognostic conclusions seem fully justified." This suggests that eventually there may be an arbitrary mathematical standard for futility. Well-documented exceptions in children and in adults are worrisome.[21,22] If there is a 0.1% error after observing for one month, is the risk 0.2% after only two weeks? We do not have the information to calculate this.

We can recognize that there is often a period two to three weeks after hospital admission when all of the health care providers and the family feel that the major effort has been completed. This is especially true with elderly patients who have multi-organ damage and few of the residual functions listed above. One indication of this provider exhaustion or futility factor is the high incidence (45%) of patient deaths and transfer out of intensive care units shortly after do-not-resuscitate orders are written.[23]

Terminal cancer might support an early declaration of futility. However, even state laws that use the word "terminal" do not supply a definition, and "terminal" surely has a different meaning at age 92 than at age 22. Many families become exhausted and lose hope during the first few weeks after admission. Even sophisticated families are not yet aware of the suggested 30-day waiting period

before declaring PVS, nor do they understand the difference between a beneficent futility at 15 days versus officially-sanctioned futility declared at 30 days.

It is likely that the one- to three-month suggested waiting period before declaring PVS will be standard for many years. Considering our economic burdens and our improving technology, there will be revised position papers and fresh viewpoints from other councils and other countries.[24] The determination of futility is such a complex decision that even the AMA Council stated their report is "... not intended to be construed or to serve as a standard of medical care."[11] While these AMA panelists are willing to list the numerical odds of an accurate diagnosis, and propose the number of months of observation needed before making a diagnosis of PVS, they are yet unwilling to propose standards for care. Their tentativeness should impress us with the awesome consequences of such decisions. Surely we cannot expect jurists or philosophers to develop practical bedside standards.

We can eventually expect more definitive suggestions from the AMA discussing the management of "pre-PVS" patients who have been ill for less than one month. Meanwhile futility will remain a nebulous major factor influencing the care of our most seriously ill patients. We will gradually accumulate evidence to indicate which testable human traits are sufficient to provide a tenuous sense of well-being. ❑

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Chaos, Alcoholism, and DWI

John R. Dykers, Jr., M.D.

Seventy-five percent of the people killed by drunk drivers are killed by drunk drivers who have never been arrested.[1]

Diagnosing alcoholism is often difficult, especially in the young, and motivating the alcoholic into treatment is often impossible.

We physicians often do not make the diagnosis of alcoholism before end stage disease because we fear offending a social drinker to no good purpose, since we also tend to believe that the alcoholic must reach "bottom" before being willing to stop drinking and enter treatment for the other aspects of alcoholism. Sometimes the "bottom" is death. As a County Medical Examiner, I examined four mangled bodies on July 4, 1988. These were healthy persons before the two-car head-on collision, except that two of them were alcoholics who were drinking. These two young men found "bottom," but they killed themselves and two others in the process. It is a serious and difficult challenge to attempt to interrupt alcoholism earlier in the disease process.

Chaos

We physicians generally prefer to think in linear terms of Koch's postulates, Newton's physics, and Galileo's pendulum. This requires that we disregard bits of messiness that interfere with a neat picture. Chaos theory gives us a new way of understanding medicine's complexities.

The chaos theory of mathematics evolved from computer models of complex weather patterns. Like many systems in nature, weather results from many unobserved, minute, complex interactions. Chaos ties the locally unpredictable details into a globally stable pattern. It is beyond my capacities and the scope of this paper to fully explain chaos theory, but in Lorenze's description, "Chaos, with all its unpredictability, is as stable as a marble in a bowl."[2]

Alcoholism

Alcoholism is a disease with patterns as complex as the weather. It is a progressive disease, subject to spontaneous remissions,[3] multi-factoral,[4] genetically predisposed,[5] and culturally induced.[6] Some alcoholics drink every day, some are week-enders, and some drink in rare binges. Some alcoholics never drive a car and some have 25 driving-while-impaired (DWI) convictions. Some alcoholics spontaneously stop drinking and others continue drinking unto death. Some alcoholics kill people with their drunkenness, while others get into recovery and are wonderful people and outstanding citizens. Some alcoholics are harder to recognize than others.

An alcoholic is a person who, when drinking, drinks in a pattern that is dangerous to himself or others.[7,8] A social drinker is a person to whom having a drink is no more important than taking a walk in the park.[9] Some alcohol consumption patterns are difficult to categorize.

The early stages of alcoholism are even more difficult to distinguish from social drinking if we culturally and socially accept occasional heavy drinking as not being a sign of disease. Denial, rationalization, minimization and manipulation may mimic normal adaptation patterns in adolescents and young adults and be reinforced by social acceptance as transient. These subtleties make it harder to push young persons to treatment and abstention without the physician's feeling like a fanatic.

Only 3% of the alcoholics we see in practice are in the end stage of the disease,[7] exhibiting total social and physical breakdown, continuous daily intoxication, or drinking to avoid withdrawal.

The history we hear from the alcoholic is devastated by denial, rationalization, minimization, and manipulation, all of which persist despite sobriety. Add to this that moderate use of alcohol is beneficial,[10] and it is easy to understand how we often become part of the denial process, facilitators rather than diagnosticians and therapists.

We debate the disease model versus willful misconduct[11] for alcoholism: I think it is both. While there is a strong genetic predisposition to alcoholism,[5] the disease model leaves room for the development of alcoholism in conducive social settings without a family history of the disease. The wide variety of clinical presentations strongly suggests that multiple alleles are involved,[5,12-14] but we are not

From P.O. Box 565, Siler City, 27344.

yet able to demonstrate precisely whether the family history of alcoholism is genetically or culturally transmitted,[15-17] nor whether chronic drinking in a bar in Saigon in the midst of war, or drinking at the club day after day in times of peace,[18] modifies biochemical pathways in such a way as to cause alcoholism.

There is certainly a ubiquitous cultural temptation to drink,[6] but we would be hard pressed to define the genetic deficiency of alcoholism as an impairment of our ability to resist this temptation. The disease model, once the alcoholic has had appropriate treatment,[19-21] should serve to enhance the prohibition against drinking again, not be used to excuse it.[22] The addiction of the alcoholic to alcohol is certainly powerful; it cannot be absolute always, because so many alcoholics stop drinking.

DWI

The DWI record and the blood-alcohol concentration are valuable landmarks in the chaos of alcoholism. They are not subject to the denial and manipulation and minimization of the history. Other valuable markers are the serum gamaglutymyl transpeptodase[23-26] and the history of trauma.[24]

One DWI is a highly significant predictor of alcoholism.[27] Between 1982 and 1985, Judge Albert J. Cramer of the Quincy District Court in Massachusetts sent 1,252 people with their first DWI to a two-day clinical assessment. Eighty-two percent were alcoholics. Drunk drivers are not mere social drinkers who happen to overindulge. Two DWIs or a blood-alcohol level of .14 or greater are diagnostic of alcoholism in a drunk driver.[28] This is not a case of "there but for the grace of God go I." To reach a blood-alcohol concentration of .14 without being inebriated beyond walking, one must develop tolerance, a hallmark of alcoholism. All of us who occasionally have drunk alcohol to a bit more than moderation shouldn't have driven home, but we were probably at .05. If you were at .10 and still able to drive, even poorly, you are developing tolerance and should heed the warning. If you need more than three drinks to feel high, beware. Being able to "hold you liquor" is tolerance. Limiting consumption to non-toxic levels is healthy, adult behavior.

"Sobriety, treatment to deal with the other aspects of alcoholism, and documenting abstinence for 18 months will not only help restore a driver's license, it will help restore a good citizen."

It is a serious error to interpret a long time between DWIs as diminishing the diagnosis of alcoholism, even if it may have been punctuated by treatment and sobriety. Relapse is a dangerous and highly unpredictable phenomenon.[20,21,27] However, stopping other addictive behaviors, such as smoking, greatly enhances the chances for an alcoholic to remain in remission.[29]

We each have an opportunity to help the alcoholic find "bottom" when patients present to us with a state medical report form (DL-78) for evaluation of their capacity to drive. Most drivers who present this form are alcoholics.* I define "bottom" as the point at which the denial mechanism breaks down. The threat of losing a driver's license is an important part of "bottom." We should use this event, not only as a landmark in diagnosis, but also as a motivation to treatment. Attorneys representing persons with DWI should help their clients by confronting them with their alcoholism and encouraging them into treatment.[17-19] The best way to recover a driver's license is by controlling the disease and becoming a recovering alcoholic. Sobriety, treatment to deal with the other aspects of alcoholism, and documenting abstinence for 18 months will not only help restore a driver's license, but will help restore a good citizen.

The complete driving record should be attached to the DL-78 and should include all DWI convictions and blood-alcohol concentrations, if any. If the record is not attached, you may request that record from the Department of Motor Vehicles (telephone 919/733-3493).

The Department of Motor Vehicles processes your DL-78,** and appeals are brought to the Medical Review Board.*** The physicians on the review board have

* This form also is used to evaluate driving impairment caused by other drug abuse, seizure disorders, diabetes, psychiatric illnesses, musculo-skeletal handicaps, cardiovascular problems, poor vision, or aging.

** The DL-78 and all other available medical material and the person's driving record are assembled by the medical branch of the Driver Licensing Section. The records are then sent to the Driver Medical Advisor in the Division of Health Services, who evaluates the materials and may consult with a volunteer panel. The Advisor recommends to the Commissioner of Motor Vehicles whether the license should be restricted or revoked. The Commissioner normally accepts this recommendation. Should the driver disagree, he or she requests a hearing before the Medical Review Board of the State of North Carolina.

*** The Board has a quorum when two physicians and a representative of the commissioner are present. We conduct hearings with the petitioner, witnesses, attorney, transcriptionist, and secretary as prescribed by General Statute 20-9. There are several such boards, and the physicians are designated by the Chairman of the Commission for Health Services, Dr. Jesse H. Meredith, Jr. During my time on the board, the other physician members have been Drs. Richard Ames, Roy Berry, Bruce Blackmon, Guy Branaman, Jr., Royster Chamblee, Jr., David Colvard, James Moore, Billy Royal, Lee Sanders, William Senter, Robert Spain, Leslie Sweeney, Edwin Thomhill, Robert Vanderberry, John Watters, and Millard Wester.

a combined experience of over 18,000 interviews in a setting where we have the complete driving record and medical evaluation and are face-to-face with the petitioner. We attempt to determine whether or not that person is an alcoholic, the stage of the disease, and whether or not that person is safe to operate a motor vehicle on the highways of North Carolina. Having served on this Board since January, 1987, I have learned that I usually can make the diagnosis of alcoholism better as a member of the Board, where the factual information is available, than I can in my office, where my primary tool has been an unreliable history.

Plan

There are some steps we can take:

1 Although when we see someone for medical evaluation with a DL-78, they are already relatively late in the disease, we can make every effort to interrupt the disease at that point.
2 Vigorously support drug and alcohol task forces in your grade schools and high schools.
3 Withdraw cultural acceptance of young peoples' drunkenness as just a passing phenomenon.
4 Encourage the present move in the North Carolina legislature to set .08 as the minimum blood-alcohol concentration at which one is charged with driving while impaired. The North Carolina Medical Society has recommended .05 and this is certainly a safer level, but cannot currently pass the legislature. We will have to have some experience at .08 before reconsidering lowering the level to .05.
5 Push legislation to facilitate impoundment of automobiles of DWI offenders earlier in their disease process, especially for driving while their license is revoked.
6 Be wary of chronic use of alcohol, even without overt anti-social abuse.
7 Increase efforts to educate health professionals and attorneys about the disease mechanism for alcoholism.
8 Support use of combined incarceration-treatment facilities earlier in the disease process.[30]
9 Reduce legal delays used to avoid confrontation with the disease and its consequences. ❑

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Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

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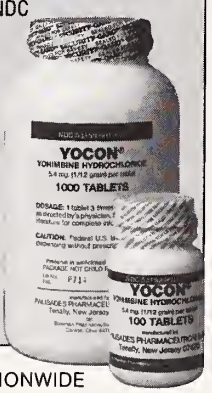
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

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The First Fifty Years of Anesthesia in North Carolina (1846-1896)

M. Faith McLellan

The anesthetic properties of ether and chloroform were first applied for surgical anesthesia in the middle of the nineteenth century.[1,2] While debate ensued over who was to be credited for the discovery of anesthesia, physicians in North Carolina quickly began to incorporate their colleagues' innovations into clinical practice. Soon after public reports of the successful use of ether and chloroform, in 1846 and 1847, respectively, state physicians began to experiment with the administration of these two agents that were to dominate the practice of anesthesia for nearly a century. Early experiments were reported in private papers, medical journals, and newspapers, and these accounts provide insight into the experience of surgeons and patients during the half-century following the introduction of anesthesia to North Carolina medical practice.

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Reports that would clearly document the first administration of ether in the state have not been located. Only three months after the administration of chloroform was first reported, however, that anesthetic was given in North Carolina. An editorial in the February 9, 1848 *Raleigh Star* announced the introduction of the agent, which took place in the course of an operation performed on February 5. Directly beneath an advertisement reading, "For President of the United States, Gen. Zachary Taylor, The Country's Choice," is the account of a "Skilful (sic) Surgical Operation":

> On Saturday last, we witnessed a highly interesting and important surgical operation, performed in this city, by DR. F.J. HAYWOOD, assisted by DR. RICHARD HAYWOOD. It was the taking of a wen from Mr. Leroy Moore, of this county, which grew immediately under the arm. The patient was thrown into a deep sleep and state of insensibility, by inhaling Chloroform, administered by DR. W.R. SCOTT—and in the space of eleven minutes, the most delicate operation of cutting out the tumor, which weighed a pound and four ounces, was accomplished, and, what is most astonishing, and will appear almost incredible to those who have never seen the effects of chloroform, without any, even the slightest pain. We watched the knife, as it was guided by the steady and skilful (sic) hand of the Doctor, laying bare the important nerves, bloodvessels (sic) and muscles of that part of the system, and there was no more shrinking or flinching from the incision, than if the man had been actually dead. We saw him on Sunday, when he assured us he felt no pain whatever—indeed, was perfectly insensible to every thing until the operation was over. He was then, to our surprise, sitting up, and doing well, having suffered no pain, and feeling none then, except "some soreness."
>
> This is not the first time such operations have been successfully performed by DR. HAYWOOD; though it is the first time, we believe, the *Chloroform* has been used in the State; and the effect was as perfect and happy as if an allwise and merciful Providence had prepared it especially for the purpose....[3]

The article continues to relate Dr. Haywood's previous experience with successful surgeries in which he had administered Letheon, a type of colored ether. A woman with "dropsy" had "twice submitted to the operation without suffering the smallest pain."[3] Two or three years earlier, in 1845 or 1846, he had removed a tumor from a local woman's jaw, "without the aid of any such agent as the Chloroform."[3] The author goes on to suggest that not only are Dr. Haywood's cases worthy to be recorded in medical journals, but also that they should be made known to the public, presumably the intention of this publication, so that patients might now more willingly submit to operations.

In 1849, as a consequence of the founding of the North Carolina Medical Society, the *Transactions* of the society began publication, creating a vehicle by which developments in medicine could be readily disseminated throughout the state. By the time the first case report appeared there, in 1851, chloroform had apparently been accepted as part and parcel of the surgical armamentarium—with some reservations.

Dr. N.J. Pittman, of Rocky Mount, reported the case of a 24-year-old man who complained of a burning sensation in his right hand beginning on March 14, 1850.[4] By the 24th the patient's arm was pulseless, and Dr. Pittman recommended amputation on the 27th. The patient "seemed gratified to know that Surgery could do something for him, if Medicine could not...."

The operation, however, was delayed, partly owing to Dr. Pittman's eight-day absence to attend the state Medical Society meeting. By April 20th, Dr. Pittman's notes were becoming graver, and they suggested some previous negative experience with anesthesia: the patient, he wrote, was "more cheerful, but thinks that he will not survive the operation of amputation; wishes to be subjected to the influence of Chloroform, from which I dissuaded him, apprehensive, as I was, that there might be some organic lesion of the heart or brain; continue bark and iron; ordered wine and good diet."[5]

Having apparently discouraged the use of chloroform, Dr. Pittman performed the operation on April 22nd. The patient initially fared poorly, with a pulse rate of 150, and cool, clammy skin. He was then given "Port wine and water freely, with black drop; [and] he soon rallied...." The final notation of the case reported the patient "in the enjoyment of fine health.... After this," wrote Dr. Pittman, "he left our neighborhood." On the topic of why the patient left town and whether his leaving was related to the horror of surgery performed without anesthesia, Dr. Pittman was silent.

At the Society's 1855 meeting, Dr. Pittman reported 11 cases from his practice,[5] detailing his experience with vesico-vaginal fistula; lipoma of the sub-scapular region; comminuted fracture of the scapula; hare-lip; polypus uteri; and perianal fistula. There was no mention of anesthesia given for any case, but perhaps it was given without incident in at least some of these operations. The 11th case, that of perianal fistula, contained this note: "Though it was a painful operation, the patient was not subjected to the influence of any anaesthetic agent. On the 9th, the patient was quiet and hopeful."

In 1857, far more daring surgery, an intra-abdominal operation, was attempted. Dr. Allman Holmes, of Clinton, diagnosed an ovarian tumor in a woman who had given birth six weeks previously.[6] Although Dr. Holmes was "fully convinced of the character of her difficulty," he first prescribed various medical treatments, none of which were successful. He informed the patient that surgery was her only hope, but she was opposed to an operation.

Several months later, the tumor had grown enormously, and so the woman asked Dr. Holmes to operate. By this time, however, he was reluctant. After consultation with the two other physicians of Clinton, and "warning her of the great danger and uncertainty of the undertaking," Dr. Holmes performed the surgery, which took place in June 1857. Chloroform was given by inhalation, and was administered by another Clinton physician, Dr. James A. Bizzell. The operation lasted 20 minutes, and the patient "recovered from the effect of the chloroform in time to complain slightly of the last stitch." While the patient had a good postoperative course, getting out of bed in about eight weeks, she died five months later; the cause of death could not be ascertained.

Dr. Holmes did not report this case until 1876, some 19 years later. Why he allowed so much time to elapse is unclear; however, that the case was reported at all may have been occasioned by his interest in the establishment of a state medical museum. To that institution Dr. Holmes hoped to present the patient's 24-pound ovarian tumor, which he had kept preserved and in his possession.

The year 1858 marked the inaugural issue of the *Medical Journal of North Carolina*, which supplemented the *Transactions*.[7] In its pages Dr. N.J. Pittman reappeared, writing from Tarboro. Dr. Pittman apparently remained wary of anesthetic agents, for in his case report of the removal of a bladder stone from a 13-year old slave named Jacob, he remarked, "No anaesthetic was used."[8]

Many articles and notes reprinted from other publications appeared in the early years of the journal, some of which detailed the progress of the practice of anesthesia around the world. The 1860 volume of the state medical journal contained two reports of anesthesia. Neither, however, was written by a North Carolina physician. "Chloroform in Midwifery" had been read before the College of Physicians and Surgeons of Louisville, and noted the danger of syncope produced by the administration of chloroform. The author, R.C. Hewett, M.D., raised the question of whether chloroform retards labor and contributes to postpartum hemorrhage,[9] an issue that was to resurface among state physicians some time later.

A new anesthetic was reported by Dr. William H. Uhler in the *Philadelphia Medical News* and reprinted in this issue. His accidental inhalation of the vapor of bisulphide of carbon had produced complete anesthesia. He noted that while in this condition, his "visions were of the most pleasant and agreeable character."[10]

Because of difficulties produced by the Civil War and the financial state of the *Medical Journal of North Carolina*, 1861 marked the last year of its publication. The final publications contained several items pertaining to anesthesia, all reprinted from other journals. Among these items was a report of a novel technique for curing earache in children. According to an article that had appeared in the *Southern Medical and Surgical Journal* and the *St. Joseph Medical and Surgical Journal*, the vapor of chloroform is efficacious in earache when applied in the following manner: A two-ounce vial with an opening in the bottom is procured. Cotton wool soaked in chloroform is put into the vial, the mouth of which is applied to the ear. An attendant then puts his lips to the punctured end of the vial, blowing the chloroform vapor into the external ear! This technique was reported to yield satisfactory results.[11]

Besides these innovations, an attempt to standardize anesthesia practice was suggested by the inclusion of a short item in a section entitled "Therapeutics." The article, "Chloroform," gave six rules for its successful administration.[12] A Professor Gross, writing for the *Medical and Surgical Reporter*, stated that he preferred the agent to ether, as it produced more rapid anesthesia, was more easily maintained, and was less likely to produce bronchial irritation and vomiting. His six rules were: (1) ensure the patient's stomach is empty before inducing anesthesia; (2) have the patient in the recumbent position; (3) allow no constriction of the chest and abdomen by clothes; (4) provide for an abundance of fresh air to mix with the agent; (5) effect the inhalation gradually; and (6) use only perfectly pure chloroform.

An article reprinted from *American Medical Times* reported two cases of aphonia that were cured by inhalation of chloroform and ether. Both patients regained their speech after administration of an anesthetic. One of these patients required surgical repair of a hernia, an operation lengthened by complications, such that ether was given for two hours. When the patient awoke, she could again speak. While the author did not state the cause of the other patient's aphonia, he suggested hysteria as the cause of the woman's difficulty.[13]

During the Civil War, chloroform was the anesthetic of choice in the South. Actually, no alternative was available, as the only supplier of ether was located in New York, and Union forces were exclusively able to acquire its total inventory of the agent.[14]

After the war, operations performed with the regular aid of anesthetics were reported by North Carolina physicians in the *Transactions* of the state medical society. At the society's fifteenth annual meeting, held in Warrenton in 1868, Dr. J.F. Shaffner of Salem reported the amputation of a soldier's arm.[15] The amputation was performed after administration of chloroform, as was subsequent revision. Dr. Shaffner reported several other cases of tumor removal and amputation, all of which were performed with chloroform.

The next year, Dr. C.J. O'Hagan reported an "exsection of the os calcis" and documented one of the complicating factors faced by early anesthetists, that of tailoring dosage to the individual patient's size and physical status. He stated, "On the 11th of April, the patient, who had become quite corpulent from his enforced sedentary habits, was brought with much difficulty, under the influence of chloroform."[16]

The brothers Haywood reported two operations performed with ether, which was once again available in the South. E.B. Haywood performed an operation for traumatic aneurysm of the superficial palmar arch; the patient "was etherized by Dr. F.J. Haywood, Jr."[17] The latter Dr. Haywood continued in his role of anesthetist in a second, rather gruesome procedure. A woman had been given chloroform for a difficult labor, but could not then deliver the child. Dr. E.B. Haywood crushed the fetus' brain with forceps so as to deliver it. The patient subsequently developed a vesico-vaginal fistula, which Dr. E.B. Haywood repaired with Sims' technique, while his brother administered ether. The anesthetic, however, "had to be discontinued on account of the vomiting produced by it."[18]

The following year, Dr. John McDonald, of Washington, NC, performed a similar operation on a woman with vesico-utero-vaginal fistula; however, no anesthetic was given.[19] The surgeon had never performed the operation, "but [he] thought it could be done as well in North Carolina as in Baltimore or New York, which some of [the patient's] friends had suggested as better places or at least enjoying more skillful surgeons." The surgery was quite successful, and Dr. McDonald reported it two years later, claiming it as neither original nor important, but offered because, in his view, "a long established habit still exists with some of the Physicians in my own and other sections of our State, of sending all difficult and interesting cases to Northern cities."

The 1875 address to the membership of the state society reviewed developments in medicine; ether and chloroform were called "priceless blessings ... second in importance to vaccination only."[20] The question of whether chloroform contributes to postpartum hemorrhage was raised again by Dr. R.L. Payne, in his "Report of two obstetric and puerperal cases."[21] When his 18-year-old patient, pregnant with her first child, went into labor, she began to have convulsions. A local doctor who was called to attend her bled her and then "he put the patient under the influence of chloroform, and kept her more or less under its influence" until Dr. Payne was consulted an hour or two later. The two physicians decided to continue the chloroform, and labor progressed slowly until the patient delivered a stillborn, premature child. The situation went rapidly from bad to worse, and the patient began to hemorrhage profusely, until she was soon in extremis. Her condition waxed and waned for the next several days, after which she died.

In Dr. Payne's discussion of this case, he asked, "Does the use of chloroform ever predispose the patient to post partum hemorrhage?... I am very strongly inclined to the opinion that it does...." He noteed that general wisdom held that ether, not chloroform, produces complete muscular relaxation, but he could not believe this to be true, since his experience had

demonstrated that sufficient quantities of chloroform could cause labor to be arrested and the heart to stop beating. He concludeed that "the chloroform used in this case was a most potent factor in predisposing to the flooding which followed ... however, in a like case, I would without hesitation resort to chloroform again." Dr. Payne reached his conclusion by arguing that the chloroform was given to control convulsions in this case, and for this indication it was indeed highly successful.

Dr. W.W. Lane, of Wilmington, reported a bad experience with anesthesia in the 1877 issue of the *Transactions*. The case involved extroversion of the bladder in an infant girl.[22] Anesthesia was given for the purpose of examining the child. In the presence of four physicians, the little girl's mother, and various friends, an attempt was made "to bring the child under the influence of chloroform, and the parts were extremely sensitive and she was very fretful, but the little one seemed to bear the anaesthetic so badly and the sympathies of the mother and friends so much aroused that we desisted from any further attempt." Shortly thereafter, the patient developed a rash; Dr. Lane, without further editorial comment, added, "which the parents attributed to the chloroform."

The valedictory address of this same issue took for its subject "hypodermic medication." In the course of the address, given by Dr. George E. Foote,[23] the local effects of anesthetics were discussed at some length. The premise of local anesthesia, according to Dr. Foote, was that "the degree of pain incident to many surgical operations is greater than the patient will readily bear, and yet not so great as to justify the risk or trouble of administering chloroform, [which in some cases] ... would be inexpedient and even hazardous." He went on to recall several operations in which morphine and atropine were injected into fibrous tumors or subcutaneously, with satisfactory results.

Dr. Foote also mentioned a novel use of chloroform espoused by three other physicians. Patients suffering from "inveterate sciatica" received an injection of chloroform in the hip. "*Complete anesthesia in the lower limb* [italics Dr. Foote]—was produced,—*lasting 10 days*" [italics mine].[23]

"It should ever be remembered by the medical profession that an agent capable of destroying sensation and suspending the functions of intellect, is, *indeed*, a dangerous one ..."

In 1883, Dr. Allman Holmes reported another case of removal of an ovarian tumor.[24] He employed a new mixture for anesthesia, that of equal parts of chloroform and ether, a technique suggested to him by a fellow physician. This was done over the reservations of Dr. Holmes, who noted parenthetically, "I always prefer chloroform, if pure, such as furnished by Squibb, of Brooklyn, as in my hands, the effects are sooner over with after operating, and causing less irritability of stomach. It should ever be remembered by the medical profession that an agent capable of destroying sensation and suspending the functions of intellect, is, *indeed*, a dangerous one, and he who does not properly appreciate its power, and use every precaution to prevent its baneful influence is more to blame than the remedy."

A similar note was sounded some nine years later in the pages of the *Charlotte Medical Journal*, another state publication, first published under that name in 1892.[7] In a short piece entitled "Caution to Anaesthetizers,"[25] a Virginia physician concluded, "in using an anaesthetic keep your wits about you, and look out for the sudden emergencies."

Chloroform was given in 1884 to an infant less than 24 hours old, according to a report appearing in that year's issue of the *Transactions*. Dr. F. Duffy, of Newbern (sic), read the case[26] before the society at its annual meeting, and called "particular attention" to the success of the anesthesia.

As the 19th century winds down, the literature of anesthesia in North Carolina journals begins to take on a more critical and less anecdotal character. The complications and adverse outcomes associated with the administration of anesthetics are reported. The reports often include the results of experiments and attempts at scientific explanation for these phenomena, rather than merely reporting the events, a trend that perhaps mirrors the development of 19th century science and medicine as a whole.

In the years 1893 to 1895, the *Charlotte Medical Journal* contains several articles dealing with problems in anesthesia. The 1893 issue warns of the hazards of chloroform and ether administration in labor,[27] with one article containing the results of chloroform given in various doses in five cases of normal labor, with its influence on muscle relaxation measured by "a carefully constructed physiological apparatus," which is not described. This abstract concludes that chloroform retards the progress of labor.[28]

"Chloroform narcosis" is an occurrence that is also commanding a good deal of attention. "A Review of Anaesthesia and Anaesthetics" in the 1894 volume contains both case reports of the complication and the results of animal studies.[29] Two antidotes for overdose of chloroform are discussed, one an "electrical remedy in cases of deep chloroform toxaemia," and the administration of amyl nitrate. Interestingly, the author notes that his sample size in the animal experiments (four subjects) is too small to lead to valid conclusions, but he presents them "with the hope that some one, more skilled than myself in physiological experimentation, would test the value of amyl in chloroform narcosis, and give the result of his experience to the profession."

The dangers of both chloroform and ether are discussed in short articles of the journal in the following year.[30,31] Spurred by the number of anesthesia-related deaths, these reports warn physicians to examine the patient carefully before giving any anesthetic, particularly if the patient has nephritis or diabetes. The indiscriminate use of anesthetics is now being tempered by appropriate reserve: "As long as anaesthetics are administered, just so long will there be danger connected with their administration. It is not a pleasant duty to put a patient to sleep, for the record shows us that one in so many never rally. How careful and precautious should every physician be in administering them."[31]

Anesthesia's history and development are traced in a review article by Dr. J.G. Blount of Washington, NC, at the 1895 annual meeting of the North Carolina Medical Society.[32] Dr. Blount, a thorough man, lists God as the first anesthetist, performing the first surgical operation upon Adam to create Eve. In addition to his wide-ranging and detailed review of anesthesia's development, he discusses current controversies in anesthetic administration, with suggestions for decreasing the incidence of adverse events. He also reviews novel methods of resuscitation and new anesthetics, methylene bichloride, ethyl bromide, and pental. With regard to the new anesthetics, however, he remarks, "none of these agents have gained a foothold on the American people."[32] Of note in his discussion is the mention of stages of anesthesia, a concept still in use for some types of anesthesia.

The year 1896 marked the 50th anniversary of William Thomas Green Morton's demonstration of ether for anesthesia; the event is noted by an article reprinted in the *Charlotte Medical Journal* from a paper presented at the Vermont Medical Society.[33] Dr. W.J. Aldrich credits Morton for being the first interpreter of the secret "Nature was trying her best to tell ..."

A North Carolina physician also reviews the progress of general anesthesia in that anniversary year. Dr. J.L. Nicholson of Richlands, NC, chaired the state society's section on surgery, and discusses recent improvements in anesthesia in his report, "Something of Surgical Tuberculosis and Anaesthesia."[34] The development of greatest interest to him is the recent recommendation to combine oxygen with the anesthetic agent, a technique he calls "one of the greatest advances in modern surgery." Dr. Nicholson carefully reviews the reported numbers of deaths occurring from anesthesia, the physical properties of anesthetic agents, and the experiments that led to the proposal of oxygenated anesthetic agents.

The literature of the first 50 years of anesthesia in North Carolina clearly demonstrates that state physicians were seriously and carefully considering how best to apply anesthetic agents for use in clinical practice. These pioneers were early convinced of the necessity of reporting their experiences, conferring with one another, and reviewing and disseminating information published elsewhere. While we may now view their ideas as crude and unsophisticated, there can be little doubt that their experiences helped promote the use of anesthetics during surgery. In giving them credit for their efforts within North Carolina, we are not simply echoing the sentiments of an overenthusiastic newspaper reporter in saying that, indeed, "it could not have been done better ... anywhere else."[3] ❑

Acknowledgments

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Letters to the Editor

The "imperative of prevention"

To the Editor:

Hooray to Dr. Chandler for his hard hitting and well reasoned analysis (The High Cost of Failure: Prisoners with and without HIV Infection, NCMJ 1991; 52:255-8).

Extending the law of cause and effect one further step in "the imperative of prevention" leads us directly to appropriate sex education and adequate contraception for the disadvantaged. Then, for the children that are born, we should be able to provide the services needed in "a first-class fashion."

One short-term money saver would be to simply require HIV testing for all persons entering or leaving the prison system. Our foolish and unscientific squeamishness about such testing must be abandoned.[1,2]

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P.O. Box 565
Siler City 27344

1 Dykers, JR, Jr. AIDS: discrimination and justice. NCMJ 1987;48:661-3.
2 Angell M. A dual approach to the AIDS epidemic. N Eng J Med 324:1498-1500.

Doctor seeks information on nasal irritation

To the Editor:

Fifteen of my patients have complained of Nasalcrom irritating their noses so much they had to discontinue use.

If any other physician has had patients who complain of this, I would greatly appreciate their comments.

Claude A. Frazier, M.D.
Doctors Park, Bldg. 4
Asheville 28801

Appreciation for Dr. Rozear

To the Editor:

Marvin Rozear has drawn the connections of history (Historical Note: North Carolina's First Hospital, NCMJ 1991;52:271-4) as intricately as he draws the connections of neuropathology. And he has addressed these connections with the same kindness that he has shown to his patients, my family, and to me. He has an artist's eye for the details and the soul.

John R. Dykers, Jr., M.D.
P.O. Box 565
Siler City 27344

Obstetrics—way back when! (A sequel)

To the Editor:

In the May, 1990 issue of this *Journal*, Dr. Courtlandt C. Berry wrote an interesting piece on obstetrics in Charlotte in the late thirties and early forties (Obstetrics—Way Back When! 51:209). In the mid-forties I was privileged to follow his footsteps and this prompted me to write a "sequel."

Our medical school class graduated in December, 1943. We went to school 12 months a year after the formal entry of the U.S. into the war after the attack on Pearl Harbor. For that reason our class graduated six months ahead of schedule and there were two classes of 1943 (March and December).

At the time of our graduation the War Manpower Commission re-allocated internship and residency quotas throughout the country. Many of us were suddenly let out of an internship because of this. Charlotte Memorial Hospital was then a new hospital without a formal, structured house officer program, so its quota was increased. A number of us applied for internship in Charlotte, a fortunate intervention of fate.

We reported for duty as rotating interns on January 1, 1944. My first rotation was obstetrics. As Dr. Berry mentioned in his original article, we were indeed fortunate to have the capable direction of Charlotte obstetricians: Drs. W.Z. & W.B. Bradford, Dr. Ernest Franklin and Dr. Brodie Nalle. At that time, Dr. Hunter Jones and others were serving in the military and Dr. Oren Moore confined his work to the Presbyterian Hospital. Because of the inspiration of these excellent doctors, obstetrics became a joy to me and I pursued it in a residency program. In medical school I had put obstetrics near the bottom of specialties to pursue. Dr. W.Z. Bradford, especially, was a great teacher and should have been head of the department at a medical school teaching program.

Charlotte was, as now, the largest city in the state but still had some small-town ways. Especially during the war, traffic was relatively light so getting around was not so hard as now. The house staff was quartered on the fourth floor. Meals, uniform and laundry were furnished. In addition we received what was a generous salary in those days, $40 a month. Licensure for house staff was not required and no thought was given to malpractice. Carl I. Flath was the administrator.

Without a higher echelon of house officers, instruction came entirely from the visiting staff. There were a couple of second-year residents but not assigned to obstetrics. The chief resident, Dr. Reid, made out schedules and did a little of everything. He was the one who later instructed me in the art of circumcision and tonsillectomy, often on the same lucky lad.

We were required to scrub on all deliveries, and though not much help, we thereby learned a great deal about how to do things and sometimes how not to do things. In addition to delivery of "service" patients, who were not abundant, we were sent to Good Sam (Good Samaritan Hospital) across town, a "colored" hospital. There, we were treated royally, fed well and given broad exposure to pathologic as well as normal obstetrics. Supervision was across town so we learned to deal with emergencies and problems first-hand. This gave us experience beyond our years.

Prenatal clinics were held in Memorial, but since volume was not great, we were farmed out to the Charlotte Health Department. We did not do home deliveries.

As alluded to earlier, my internship in Charlotte turned out to be a great experience, and better, I'm sure, than the one to which I'd been accepted originally. I like calling North Carolina home.

Donald C. Schweizer, M.D.
1009 Bay Head Circle
Wilmington 28405

Statement to the Physicians of North Carolina from the Committee on Drug Abuse and Pharmacy of the North Carolina Medical Society

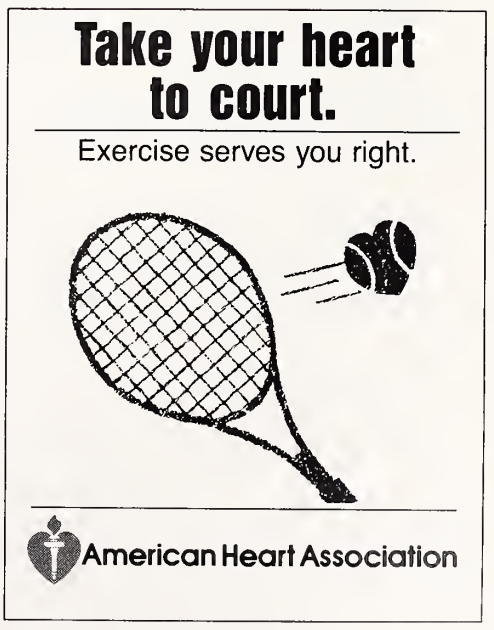
There is an honest difference of opinion among experts concerning the administration of opiates in some patients with chronic pain syndromes. There is also a similar divergence of opinion concerning the anxiolytic effect of benzodiazepines after long-term usage.

Some prescription medications, such as opiates, amphetamines, barbiturates, benzodiazepines, and related drugs, can and do cause and perpetuate addiction.

Because of these potential dangers, as well as other possible adverse effects, these drugs should be prescribed for the proper, current indications, using up-to-date guidelines. All physicians are encouraged to keep current their knowledge of the proper use of these drugs as well as their patterns of abuse. Remember also that there are legal restrictions of such drugs, based on their abuse and addictive potential. Prevention of careless and inappropriate prescribing of potentially addictive medications will protect our patients and ourselves and prevent unwarranted restriction of our prescribing practices.

Ronald B. Mack, M.D., Chairman,
Committee on Drug Abuse and
Pharmacy of the North Carolina
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Department of Pediatrics
Bowman Gray School of Medicine
Winston-Salem 27103



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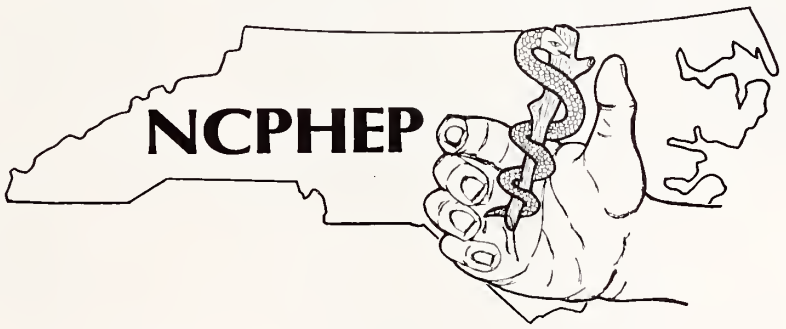
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Continuing Medical Education

August 17
Infertility and the Assisted Reproductive Technologies : An Update
Place: Chapel Hill
Credit: 6.5 hours Category I, AMA
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

September 5-6
ACLS Retraining Course
Place: Raleigh
Credit: 8 hours AAFP
Info: Helen Creech, R.N., Course Coordinator, Rex Hospital, 4420 Lake Boone Trail, Raleigh 27607. 919/783-3161

September 7
Progress in Gastrointestinal and Liver Diseases
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

September 11
The Changing Role of Medical vs Surgical Management in the 1990s
Place: Fayetteville
Credit: 7 hours Category I AMA, AAFB Accreditation Pending
Fee: $30.00
Info: Charles Ellenbogen, M.D., Director, Internal Medicine, FAHEC, 1601 Owen Drive, Fayetteville 28304. 919/678-7213

September 13
Clinical Advances in the Diagnosis and Treatment of Thrombotic Diseases
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

September 13-14
Practice Management Conference /Opportunities Fair
Place: Research Triangle Park
Credit: TBA
Fee: Resident Physicians $45; Family Physicians $125; Office Managers $85
Info: Marietta Ellis, NC Academy of Family Physicians, P.O. Box 18469, Raleigh 27619. 919/781-6467

September 16 - Winston-Salem
September 23 - Greensboro
Risk Management: In Practice
Credit: 2 hours Category I AMA
Info: Dianne Reinoso, Loss Prevention Manager, Medical Mutual Insurance Co. of NC. 1-800/662-7917

September 20
What's New in Surgery and Ambulatory Care?
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

September 20-21
Chemical Pathology in the 21st Century: The Challenge of Data Creation, Management and Diagnosis
Place: Atlantic Beach
Credit: 9 hours Category I AMA
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

September 23-27
11th Annual Symposium on Chlorinated Dioxins and Related Compounds
Place: Research Triangle Park
Info: Sharon Wills, Program Assistant, Office of Continuing Education, UNC School of Public Health, CB #8165, Miller Hall, Chapel Hill 27599-8165. 919/966-4032

October 2-4
International Symposium on Acute Renal Failure
Place: Chapel Hill
Credit: 14 hours Category I AMA
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

October 3-5
Practical Geriatrics
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

October 11
Laboratory Aspects of Organ Transplantation
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

October 18
Symposium on Cost-Effective Management of Coronary Artery Disease
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

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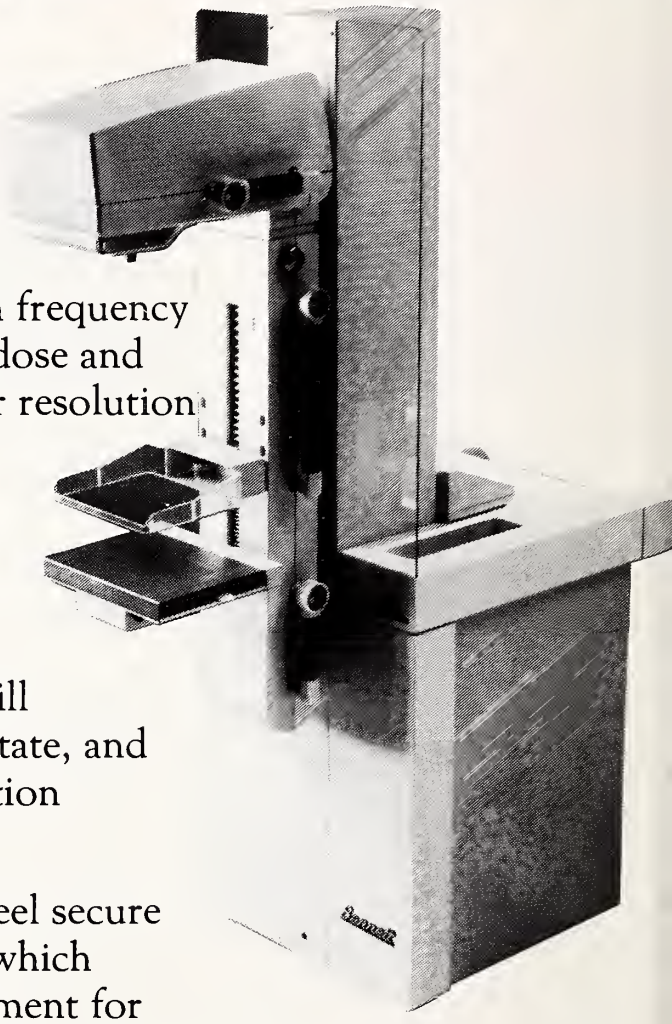
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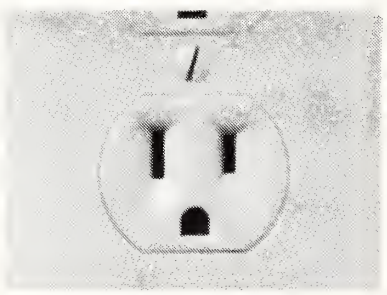


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For Doctors and their Patients

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FOR DOCTORS AND THEIR PATIENTS

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Extracorporeal Membrane Oxygenation for Newborn Infants with Persistent Pulmonary Hypertension

Valya E. Visser, M.D., Joseph Cook, M.D., James P. Hamilton, M.D., Docia E. Hickey, M.D., Duncan Morton, Jr., M.D., and Mary Anne Rathbun, M.D.

Pulmonary failure remains a significant cause of mortality in term newborns despite modern advances in the technology of assisted ventilation. Mortality is high because of the newborn infant's predisposition to hypoxic pulmonary vasoconstriction. Significant hypoxemia in the neonate, regardless of cause, leads to an increase in pulmonary vascular resistance which tends to divert blood away from the lungs. When pulmonary vascular resistance rises above systemic resistance, the result is a vicious cycle of decreased pulmonary blood flow, increased extrapulmonary right-to-left shunting, hypoxemia, and myocardial failure. It is this complicating hemodynamic state, referred to as persistent pulmonary hypertension of the newborn (PPHN), which carries such a high mortality.

When PPHN is severe, conventional therapy is frequently unsuccessful. Assisted ventilation does not reverse the hypoxemia because it is pulmonary blood flow, not alveolar ventilation, which is compromised. Attempts to dilate the pulmonary vascular bed pharmacologically have met with some success, but there is no available agent which selectively dilates the pulmonary bed. The inevitable concomitant dilation of the systemic circulation during vasodilator therapy often tips these very sick infants into overt shock and worsens their shunting. Hyperventilation or alkali infusion to achieve alkalosis has been the most successful therapeutic maneuver for dilating the pulmonary vascular bed, but not all infants respond at a pH which may be safely sustained for a prolonged period of time. As a result, PPHN remains a life-threatening complication of neonatal cardiopulmonary disease.

The use of extracorporeal membrane oxygenation (ECMO) to treat a series of newborns with PPHN was first reported by Bartlett et al. in 1977.[1] In these and subsequent studies,[2] ECMO successfully oxygenated newborn infants who were dying of hypoxia. In most cases, ECMO led to a decrease in pulmonary vascular resistance and allowed time for resolution of the underlying pulmonary disease. Many of the premature infants in these early studies did not tolerate the heparinization required to maintain flow through the extracorporeal circuit and succumbed to intracranial hemorrhages,[3] but most mature newborns tolerated the procedure without significant hemorrhage and survived to discharge. Later experience with more refined criteria for patient selection suggests that over 80% of term or near-term neonates dying of pulmonary conditions complicated by PPHN will survive with ECMO therapy.[4] This report describes our experience with the first 50 newborns treated with ECMO at our institution.

Materials and Methods

Patient Selection

Criteria for selection of patients are shown in table 1. PPHN was suspected clinically in any infant with severe hypoxemia unresponsive to positive pressure ventilation, and diagnosis was confirmed by echocardiogram. All infants with life-threatening pulmonary hypertension complicating potentially reversible pulmonary disease were considered possible candidates for ECMO therapy, but small size, immaturity, or pre-existing complications excluded some candidates. Oxygenation criteria defining life-threatening pulmonary failure are based on published criteria predicting 80% mortality.[5-7] The remaining criteria define specific instances when infants are at risk for death from pulmonary vasospasm but do not meet oxygenation criteria.

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See the article following this one for an account of one-year outcomes.

Table 1
Criteria for ECMO Patient Selection

Indications

Life-threatening pulmonary failure (one or more of the following) secondary to lung disease with a significant reversible component.

1. Oxygenation Index* > 40 for four hours
2. $AaDO_2$* > 610 for eight hours
3. PaO_2 < 50 for four hours
4. PaO_2 < 40 for two hours
5. Borderline oxygenation plus hemodynamic instability
6. Oxygenation dependent on extreme alkalosis (pH > 7.65)
7. Congenital diaphragmatic hernia, repaired, with unstable oxygenation
8. Congenital diaphragmatic hernia, unrepaired, too unstable for surgery
9. Progressive barotrauma

Contraindications

Pre-existing intracranial hemorrhage
Active coagulopathy
Associated congenital anomalies or acquired organ dysfunction(s) incompatible with survival.
BW < 2.0 kg.
GA < 34 weeks

* ref 5 + ref 6

Technique

The technique of extracorporeal circulation used in neonates has been described in detail by Bartlett and Gazzaniga.[8] Venous blood is drained from the right atrium by gravity and propelled by a nonpulsatile roller pump through a membrane oxygenator, where gas exchange occurs. The oxygenated blood is then rewarmed in a heat exchanger and returned to the right common carotid artery via an arterial cannula. Anticoagulation is achieved by continuous infusion of heparin, varying the infusion rate to maintain hourly activated clotting times at 220 to 240 seconds.

All infants underwent venoarterial perfusion. Venous access was obtained by cannulation of the right internal jugular vein in 49 patients and the right femoral vein in one. An accessory femoral catheter was placed in two infants with jugular catheters to obtain additional venous flow. Arterial access was the right carotid artery in all infants. Cannulations were performed in the neonatal intensive care unit (NICU) under fentanyl anesthesia.

Once bypass was established, ventilator support was reduced to peak inspiratory pressures 16 to 20 cm H_2O, PEEP 3-4 cm H_2O, IMV rate 10/minute, and room air. Buffers were discontinued once membrane gas exchange was established, and pressors were weaned as tolerated, usually over several hours. Intravenous glucose and electrolytes were initially administered at 100 to 120 cc/kg/day, and parenteral hyperalimentation was begun after electrolytes stabilized. Light sedation was maintained by continuous fentanyl drip. Pre-ECMO antibiotics and any other nonvasoactive medications were continued on their usual schedules.

Heart rate, arterial blood pressure, arterial oxygen saturation, and mixed venous oxygen saturation were monitored continuously during ECMO. Arterial blood gases were monitored hourly. Complete blood count and serum electrolytes were monitored at 8-hour intervals. Platelet count was maintained above 80,000 and hematocrit above 45% by transfusions. Cranial ultrasound was performed daily.

Initial bypass flows of 110 to 140 cc/kg/minute were required to achieve adequate gas exchange. Blood gas tensions were manipulated by varying either rate of bypass flow or gas delivery to the membrane. As pulmonary gas exchange improved, rate of bypass flow was gradually decreased until normal arterial blood gases could be maintained without the extracorporeal membrane. The cannulae were then removed and the vessels ligated.

Following ECMO, infants were weaned from assisted ventilation when they were able to maintain adequate gas exchange breathing spontaneously. Infants initially referred from other Level III nurseries were transferred back to the referring hospital as soon as they were stable enough for transport.

Results

Fifty infants were treated with ECMO from December, 1986, through June, 1990. Birth weights ranged from 2200 to 4630 grams, and gestational ages from 35 to 42 weeks. Thirty-four were males and 16 were females. Four were inborn, 14 were born in other hospitals in the Southwest Central Perinatal Region, and 30 were transferred from NICUs outside the Region.

Primary pulmonary diagnoses are shown in table 2. All infants were treated with oxygen and positive pressure ven-

Table 2
Pulmonary Diagnoses and Survival with ECMO

		Survived
Meconium aspiration syndrome	20	20 (100%)
Idiopathic PPHN	9	6 (67%)
Respiratory distress syndrome	6	6 (100%)
Congenital diaphragmatic hernia	10	7 (70%)
Sepsis/pneumonia	5	4 (80%)

tilation prior to ECMO. Specific ventilator pressures and rates varied depending on each individual infant's underlying disease, pulmonary compliance, and degree of barotrauma, but in all infants a variety of combinations of pressure and inspiratory time were tried before conventional ventilation was judged to have failed. Four infants received inhaled surfactant (Exosurf). Radiographic evidence of barotrauma was present prior to ECMO in 17 cases.

Vasoactive drugs administered prior to ECMO included Dopamine in 45 (90%), Dobutamine in 35 (70%), Tolazoline in 22 (44%), Isuprel in 6 (12%), and Prostaglandin-E in 2 (4%). Systolic blood pressure could not be maintained above 60 mmHg in 18 infants. Central venous pressure (CVP) was monitored in 36 infants and was between four and 12 (after volume expansion) in all cases. All but two infants received sodium bicarbonate and/or tromethamine (THAM) at some point during their pre-ECMO course (excluding initial resuscitation). Alkalosis was achieved in 39 (78%) to a maximum pH of 7.50 to 7.59 in 19, 7.60 to 7.69 in 17, and above in 7.7 in 3. Thirty-four infants were treated with pancuronium. Sedation was administered as needed with morphine, fentanyl, or midazolam.

Clinical pictures were varied at the time the decision was made to initiate ECMO. In 14 instances the infants could not be stabilized following an acute hypoxic event or interhospital transport, and ECMO was begun emergently. Severe parenchymal dysfunction with both hypoxemia and hypercarbia was present in three infants. Hemodynamic instability or intractable shock plus hypoxemia was present in seven. Four infants (three of whom had recently undergone repair of congenital diaphragmatic hernia) exhibited life-threatening swings in arterial pO_2. In 18 cases, hemodynamics were stable and alveolar ventilation was adequate for CO_2 removal, and ECMO was begun solely because of profound hypoxemia. In the remaining four cases, arterial oxygenation was still adequate but serial chest x-rays demonstrated progressive, severe barotrauma.

All 50 infants were cannulated successfully and placed on bypass. Mean age at which bypass was established was 50 +/- 10.0 (mean +/- SD) hours, with the majority occurring on the second day of life. ECMO was terminated prior to full recovery because of intracranial bleeding in six infants, all of whom survived. Of the remaining 44 infants, 38 responded to ECMO with decreasing pulmonary vascular resistance and gradual pulmonary recovery. Mean length of bypass for the entire group was 164.2 +/- 77.8 hours.

Six infants did not recover with ECMO therapy and five of the six subsequently died. In three instances, serial echocardiograms during ECMO showed no resolution of the pulmonary hypertension, and bypass was discontinued at 9,12, and 14 days. Two of these infants died, and autopsies showed pulmonary microthrombi in one and medial hypertrophy of the pulmonary arterioles in the other. The surviving infant is now twelve months of age, and cardiac catheterization and clinical course are consistent with primary pulmonary hypertension. A fourth infant (with congenital diaphragmatic hernia) was cannulated without difficulty, but venous flow rate was too low to achieve desired bypass flow, despite the addition of a second cannula and repeated attempts at volume expansion with colloid infusion. Oxygenation was achieved with a combination of partial bypass and positive pressure ventilation, but she succumbed to acute renal failure. A fifth infant, also with congenital diaphragmatic hernia, initially responded to ECMO and was weaned from bypass after nine days, but fatal pulmonary hypertension recurred two days after ECMO. The sixth infant developed profound myocardial failure which showed no improvement after 13 days of bypass.

Intracranial hemorrhage developed during ECMO in 12 infants. Hemorrhage was limited to the germinal matrix in two, to the cerebellum in one, and to punctate areas in the basal ganglia in two. All four of those infants survived. The remaining seven hemorrhages were located in the cerebral parenchyma. Three occurred as terminal or near-terminal events in infants dying of hypoxia after unsuccessful ECMO runs. The remaining four were large right parietal hemorrhages. All four of these infants survived, and three of the four developed hydrocephalus and required ventriculo-peritoneal shunts. One of the infants with a small basal ganglion hemorrhage and two additional infants without hemorrhages had cerebral infarcts on post-ECMO computed tomographic (CT) scanning. In all cases, the infarcts were multiple and were associated with diffuse central nervous system atrophy. Combined incidence of CNS infarction and hemorrhage in this series was 28%.

Bleeding outside the central nervous system was usually minor. Cannula incisions often oozed for several days but required re-exploration in only three instances. Urine, gastrointestinal secretions, airway secretions, and thoracostomy tube drainage usually contained microscopic amounts of blood and were sometimes grossly bloody, but significant blood loss from these sites did not occur. Bleeding from surgical wounds responded to pressure. One laparotomy was performed during ECMO for recurrence of a diaphragmatic hernia. Adequate hemostasis was achieved with liberal use of cautery.

Systemic hypertension was a frequent complication of neonatal ECMO. Systolic pressure greater than 90 mmHg for at least four consecutive hours occurred in 28 cases. Systolic pressure was greater than 100 mmHg for over four hours in 15 of the 28. Seventeen responded to Lasix, and seven were treated with Nitroprusside. Hypertension was never noted prior to day two of bypass and most commonly on day three. Intracranial bleeding did not correlate with hypertension. (Chi-square = 1.41, p = 0.24) Two infants remained hypertensive after ECMO and a third had the onset of systemic hypertension following ECMO therapy.

Three infants had a history of seizures prior to ECMO. Seizures occurred during ECMO in nine infants, one of whom had exhibited seizure activity prior to ECMO. All were controlled with phenobarbital at usual therapeutic levels. The occurrence

of seizures during bypass did not correlate with intracranial bleeding or infarction or with systemic hypertension.

Clinical course following ECMO was quite variable, influenced by the nature of the underlying disease and prior therapy as well as course and complications during ECMO. One infant died nine days after ECMO of acute pneumonitis superimposed on residual lung damage. Mean time to extubation for the remaining 44 infants was 6.8 days. Two infants continued to require assisted ventilation after 30 days of age (extubated at 39 and 43 days), and an additional nine infants required supplemental oxygen past 30 days, for an incidence of bronchopulmonary dysplasia of 25% in survivors. One of these infants died of pneumonia at 19 weeks of age.

Forty-three infants (86%) survived to hospital discharge. Length of hospitalization ranged from 14 to 96 days. Feeding problems were common post-ECMO. No specific neuromotor or anatomic dysfunction could be identified and all infants tolerated formula when gavage fed. Nipple feeding improved gradually with time. Other causes for prolonged hospitalization were recurrent pleural effusions, infections of indwelling catheters, and ventriculoperitoneal shunting for hydrocephalus.

Provision of neonatal ECMO was extremely labor-intensive, requiring two specially trained ECMO Specialists (Registered Nurses) per patient during all shifts in addition to complete intensive care nursery and laboratory support services. Full surgical teams were present for cannulation and decannulation. Total hospital charges for infants in this series averaged approximately $75,000 per patient. Coverage of charges by third-party carriers was variable, but the majority were covered.

Neurodevelopmental outcome is the subject of a second manuscript and will not be described in detail here. Of the first 30 survivors who have reached 12 months of age, 71% were normal, 7% were found to have some developmental delay, and 21% had significant delays. Two infants were lost to follow-up.

Discussion

This experience confirms reports by others demonstrating successful treatment of neonatal pulmonary hypertension with extracorporeal oxygenation.[4,9,10] The membrane oxygenator and supporting circuit were found to be both safe and effective when used for a period of time long enough to allow resolution of a variety of neonatal pulmonary conditions and the concomitant pulmonary hypertension. This experience also confirms previous reports that neonatal ECMO is not without risk. Complications clearly attributable to ECMO therapy include systemic hypertension and bleeding. Bleeding into ischemic central nervous system lesions is particularly worrisome because of its potential for lasting sequelae. Although exact mechanisms remain to be elucidated, there is little question that these complications are related to the bypass procedure and the anticoagulation required by ECMO. Disordered local autoregulation in response to loss of pulsatile arterial flow may also contribute in some instances.

Published series report 34% to 46% of infants surviving after ECMO will have an abnormality identifiable on CT scan.[11-13] The primary lesions in most cases are believed to be ischemic, with hemorrhage as a secondary phenomenon. Carotid ligation is at best only partially responsible for the ischemia, since many lesions are located on the left or bilaterally. Cerebral venous obstruction by the jugular drainage catheter may further contribute to the central nervous system damage. Central nervous system ischemia prior to ECMO is also likely significant in this group of very sick infants, but minimal data exist because of limitations of bedside evaluation during this phase of the clinical course.

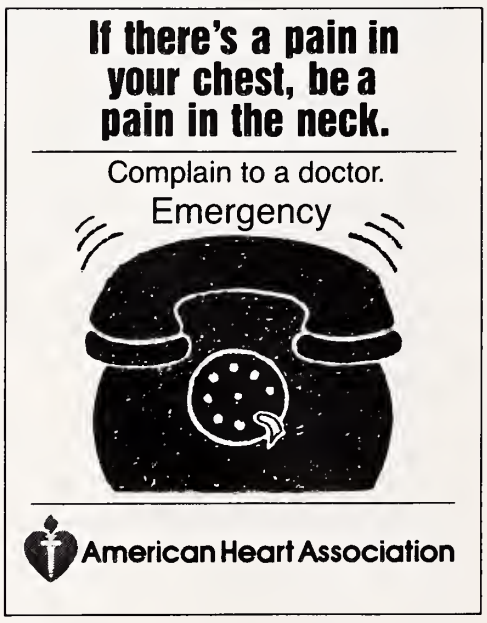
Identification of optimal indications for ECMO therapy remains a major challenge. In present practice, measures of oxygenation are used to identify infants with an 80% mortality risk,[5-7] and these infants are considered candidates for ECMO. However, the oxygenation criteria presently in use were developed using a clinical experience which is now several years old. More recent work[14] has shown that many infants whose oxygenation is comparable will survive today with improved neonatal intensive care, without ECMO. Clearly other factors in addition to oxygenation are important determinants of survival in PPHN. Patient selection criteria should ideally include measures of pulmonary barotrauma, pulmonary vascular resistance, and hemodynamic stability, but these are nearly impossible or impractical to quantitate. As a result, inadequate oxygenation remains the primary indication for ECMO, modified in some instances by the presence or absence of radiographic changes or hemodynamic instability. Hopefully more precision will be possible as experience with patient selection for ECMO increases. Patient selection will also be improved as increased experience allows criteria to be developed specific to different underlying pulmonary conditions.

Despite the successful treatment of PPHN with neonatal ECMO reported here and elsewhere, morbidity is significant. Modified methods are already becoming available, such as the double lumen venous catheter which spares the carotid artery from ligation, and research continues into new methods of anticoagulation in an attempt to spare infants from systemic heparinization. Nevertheless, it is unlikely that the morbidity of neonatal ECMO can be reduced to a truly acceptable level. The best approach to PPHN is prevention, and many causes of perinatal asphyxia are theoretically preventable with more widespread prenatal care and advances in assessment of fetal well-being. Hopefully, effective and safe pulmonary vasodilators will become available for treatment of infants with PPHN that cannot be prevented. In the meantime, neonatal ECMO can provide effective therapy for pulmonary hypertension in neonates who would not otherwise survive. ❑

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1. Short-term treatment of **active duodenal ulcer.** Most patients heal within four weeks.
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3. The treatment of **pathological hypersecretory conditions** (eg, Zollinger-Ellison syndrome and systemic mastocytosis).
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In normal volunteers, SGPT values were increased to at least twice the pretreatment levels in 6 of 12 subjects receiving 100 mg qid intravenously for seven days, and in 4 of 24 subjects receiving 50 mg qid intravenously for five days. There have been occasional reports of hepatitis, hepatocellular or hepatocanalicular or mixed, with or without jaundice. In such circumstances, ranitidine should be immediately discontinued. These events are usually reversible, but in exceedingly rare circumstances death has occurred.

Blood count changes (leukopenia, granulocytopenia, thrombocytopenia) have occurred in a few patients. These were usually reversible. Rare cases of agranulocytosis, pancytopenia, sometimes with marrow hypoplasia, and aplastic anemia have been reported.

Although controlled studies have shown no antiandrogenic activity, occasional cases of gynecomastia, impotence, and loss of libido have been reported in male patients receiving Zantac, but the incidence did not differ from that in the general population.

Incidents of rash, including rare cases suggestive of mild erythema multiforme, and, rarely, alopecia, have been reported, as well as rare cases of hypersensitivity reactions (eg, bronchospasm, fever, rash, eosinophilia), anaphylaxis, angioneurotic edema, and small increases in serum creatinine.

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Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

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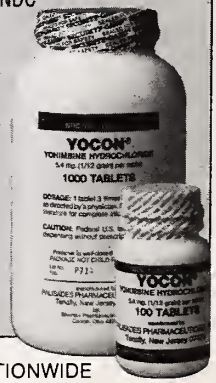
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SCIENTIFIC ARTICLE

Extracorporeal Membrane Oxygenation Treatment

One-Year Outcomes for North Carolina Infants

Kathleen Underman Boggs, Ph.D., and Valya E. Visser, M.D.

Neonatal extracorporeal membrane oxygenation therapy (ECMO) provides life-saving cardiopulmonary support for newborn infants with pulmonary failure. ECMO therapy is increasingly becoming accepted as an alternative to traditional ventilation and its associated problems of barotrauma.[1,2] Treatment efficacy has been documented for meconium aspiration and other conditions including congenital diaphragmatic hernia, respiratory distress syndrome and sepsis.

Beyond issues of mortality, concern about morbidity problems for survivors has lead to the instigation of a few follow-up evaluation studies. Significant developmental or neuromotor deficits are reported to occur in 10% or more of the survivors with normal outcome reported for 70% to 80% or more of these children.[3-6]

Extracorporeal membrane oxygenation for neonates had been utilized since December of 1986 at Carolinas Medical Center, Charlotte, NC. Over 50 neonates whose pulmonary failure failed to respond to more traditional treatment methods have thus far received ECMO. Newborns were typically transferred from across the State and occasionally from out-of-state within 24 hours of birth and were evaluated for possible ECMO treatment. The mean duration of bypass treatment has been seven days (175 hours, range 14 to 386). Soon after coming off the pump many of these neonates were transferred back to the referral center or nursery closer to home for convalescence. A few babies were discharged directly to their homes.

A follow-up assessment study was instituted in 1988 to provide information about the efficacy of treatment. The primary purpose of the study was to evaluate long-term physiological and developmental outcomes for the infants and to examine effects of the experience on their families. The possibility of significant hypoxia prior to treatment and the risk of ischemia and hemorrhage during treatment create a potential for brain damage as evidenced by neuromotor or cognitive deficits. Neurodevelopmental evaluation of each infant at one year of age provides qualitative indices of program treatment outcome beyond that provided by figures on survival rates.

This article describes follow-up information assessed one year after treatment for the first 34 neonates receiving ECMO. Comparisons are provided with information from the national registry in Ann Arbor for the 1,852 infants treated during the same 2 1/4 year time period.

Method

Extensive demographic data were compiled on the initial 45 treated neonates, including diagnoses, birth history and complications. After discharge informed consent was sought from parents to enroll their infant in the follow-up study. When the infant approached his first birthday telephone contact was made with parents to obtain developmental information about the baby in an interview based on a modification of Denver developmental (DDST) milestones; arrangements were made to administer the Bayley psychomotor developmental index (PDI) and mental developmental index (MDI) scales either in the home or at a clinic. Two questionnaires were then mailed to the parent to evaluate family adaptation according to six subscales on the Family Dynamics Measure and to assess perceived social support using a series of three Cantril ladders. Letters were also sent to all known health care providers to elicit information about the infant's physiological status, with particular focus on respiratory and neurological status at one year. Follow-up protocol includes recommendation for a comprehensive physical exam as well as the developmental testing. Currently CT scans and chest x-ray are recommended only if there was evidence of pathology at the time of discharge.

From the University of North Carolina at Charlotte, Charlotte 28223 (KUB), and Director, ECMO Program, Carolinas Medical Center, Charlotte 28232 (VEV). See the article preceeding this one for an account of Dr. Visser's experience with the first 50 newborns treated with ECMO at Carolina Medical Center.

Results

Descriptive statistics were used to examine a number of background characteristics of both infants and their families. Although no national data are available regarding mothers, in this study of 45 births, the average maternal age was 26.1 years (range 16 to 38). While siblings ranged in number from 0 to 4, most commonly the ECMO infant had one living sibling. The vast majority of families reported father living in the home (N=36). Income level varied greatly; nearly half the families (42.5%) did not have private insurance. While some of these were medicaid insured families, 20% of all the subjects were completely uninsured.

Table 1 illustrates some of the characteristics of infants who receive ECMO. Both national and study data indicate a majority of these infants are male, with a disproportionate representation of nonwhites, reflective of the generally higher risk status of nonwhite neonates in America and especially in North Carolina. Of the initial 45 babies in the study, 28 were Caucasian, 16 Black, and one Native American.

While 53% (n=23) of births of infants in the study were by Cesarean section for reasons listed as 'fetal distress,' pulmonary failure was not immediately apparent in many of these infants. The mean 1 minute Apgar was 5.6 (SD 2.5, range 0 - 9).

The principal condition necessitating ECMO both nationally and in this study was meconium aspiration. The next most common etiology found in the Carolinas Medical Center (CMC) study group was congenital diaphragmatic hernia, which ranked as the third most prevalent cause nationally. Only when no other diagnosis was discernible, was persistent pulmonary hypertension (PPHN) listed as a primary diagnosis in study group neonates, yet the reported rate remains higher than in the national sample. As table 1 indicates, fewer cases of respiratory distress syndrome and infection occurred in the CMC group. Requirements of cannulation necessitate that the infant be of sufficient size to allow adequate bypass flow. While criteria have recently been revised to accept younger neonates, gestational age and weight figures show most infants were term babies. The total duration of ECMO therapy was somewhat longer, with early termination occurring subsequent to cranial bleeds in a few neonates.

Table 1
A Comparison of characteristics of ECMO Infants in the U.S. (N=1852) and at Carolinas Medical Center (N=45)

	USA	CMC
Sex: Male	1116 (59%)	30 (66.7%)
Female	763 (41%)	15 (33.3%)
Race: White	67%	62%
Nonwhite	33%	38%
Primary Diagnosis:		
MAS	689 (37%)	19 (42.0%)
RDS/HMD	287 (15%)	4 (8.9%)
CDH	319 (17%)	10 (22.2%)
PPHN	241 (13%)	9 (20.0%)
Infection	247 (13%)	2 (4.4%)
Gestational Age (weeks):		
Mean	39	40
SD	2	2
Range	30-44	35-43
Birth Weight (grams):		
Mean	3260	3276
SD	580	585
Range	1600-5500	2206-4600
Total Duration on ECMO:		
Mean	131	175
SD	76	83
Range	1-673	14-386

Timeline

Neonatal Period	12 Months Old
1. Demographic data	1. DDST Milestones
2. Diagnoses	2. Bayley Development Scores
3. Duration on ECMO	3. Physical Exam Data
4. Complications	4. Family Dynamics Measure
	5. Social Support Rating Scales

Complications

The National Registry in Ann Arbor has attempted to standardize categorizations of ECMO related complications; however, comparisons of data from the 63

Centers in the USA are problematic. Neurological complications predominate nationally and include cerebral hemorrhage or infarction. The study group had less renal dysfunction and infection but had higher frequencies of cerebral bleeding and of hypertension.

Infant Outcomes at One Year

The survival rate for study group infants eligible for one year follow-up is 30 of 34 infants treated. The four deaths all occurred in the neonatal period. This represents a survival rate of 88.2% as compared to a national rate of 84.1%, though individual studies in the literature report survival of more than 90%.[7]

Analyses of infant developmental outcomes were done for 28 of the 30 survivors able to be tracked after discharge (two were lost to follow-up). Bayley scores for mental functioning (MDI) are available for 20 of the 28 tracked infants. Keeping in mind that test scores are standardized to a mean of 100, 16 infants tested within normal parameters. The average test score for study infants was 96.4. Severely delayed infants were scored at <50. Following Penny Glass's method, four infants scored more than two Standard Deviations below normal and were categorized as severely delayed mentally. The average Bayley PDI motor function score was 87.7, with a fifth child found to be in the severe delay category on just this motor function section of the test. DDST milestone information was obtained for 26 of the 28 follow-up infants. Based on reported achievement of these milestones, another infant was evaluated as severely delayed, for a total of six children.

In summary, of 34 infants, four died during or shortly after treatment. Two infants were lost to follow-up, and of the remaining 28 infants, 20 (71.4%) were assessed as functioning at normal expected developmental levels, two (7.1%) were found to have some qualities indicative of moderate developmental delay, and the remaining six (21.4%) were found to have significant delays.

Letters sent to all known primary health care providers to elicit reports of one year information provided some additional information about physiological status. Only one infant is known to have significant residual respiratory problems, while one other has some minor respiratory disturbance. Other problems reported include six with speech delays, six with motor impairment and one with a hearing deficit.

While a large number of neonates who were discharged or transferred had feeding or sucking difficulties, follow-up information indicates that at least two infants continue to have alterations in nutrition one year after treatment. These physiological problems are primarily found in the severely delayed infants. When infants with severe developmental delays are omitted, few residual physiological alterations have so far been reported by health care providers for infants over one year. However, these data are spotty with much missing information and much variation in the type of physical exam information provided by care givers. When outcome was submitted to analysis, the only significant factor found in relation to one-year outcome was the primary diagnosis. Examination of data shows the poorest outcome for the ten Congenital Diaphragmatic Hernia neonates, with only two of the seven survivors testing as functioning normally (Chi-square = 12.8, df 4, p = <.05). Unlike Glass's sample, poor outcome was not found to be statistically associated with major intracranial hemorrhage.

Family Outcomes

Higher levels of personal distress and negative child-rearing attitudes have been reported in ECMO mothers. To determine how this critical, intensive care experience affected the parents, family functioning one year after treatment was evaluated for 18 families who returned the questionnaire. The instrument used is the Family Dynamics Measure, a 62-item Likert-type scale with established validity and reliability. Lower scores indicate 'healthier' family functioning. The six subscales have a positive and negative component: individuation-enmeshment; mutuality-isolation; flexibility-rigidity; stability-disorganization; clear versus unclear communication; and role reciprocity versus conflict. Results are comparable to those reported for families of premature infants, suggesting that post-ECMO families function similarly to families with infants who had other intensive care experiences. A further comparison study with families delivering a healthy newborn is in progress.

Family members need a great deal of support both during the treatment phase and following discharge. To assess the families' perception of the quality of support, a series of three Cantril ladders was used. On a scale of 0 to 10 (lowest to highest support possible) families rated support from hospital staff as overwhelmingly high, with a mean level of 9.8 (SD .55); while support from professionals after discharge was rated somewhat lower, with a mean of 8.2, SD 2.6; and support from kin averaged 9.1, SD 1.8.

Summary

Initial survival rates for the first 45 North Carolina ECMO neonates in the study group are somewhat better than national figures. Developmental functioning as assessed at one year of age is comparable to that reported in other studies. A congenital diaphragmatic hernia diagnosis was significantly related to poorer outcome. Measures of family functioning approximate those reported for families of non-ECMO neonates treated in intensive care. Support provided by ECMO staff was rated at a notably high level.

With nearly three thousand survivors and multiple numbers of ECMO centers now operating in this country, ECMO has made the transition from an experimental treatment to an established procedure for treatment of neonates in pulmonary failure. A few beginning attempts to utilize ECMO with older patients are being made. Neonatologists are now directing efforts

toward refining techniques and selection criteria. Further evaluation of longer-term effects of this type of treatment is essential. Effective protocols for follow-up care need to be designed, particularly for those at greatest risk for developmental disability. ❑

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Aphorisms of the Month

Edited by Daniel Sexton, M.D.

Experience, Doubt and Wisdom

It is a common error to think the more a doctor sees the greater his experience and the more he knows.

—William Osler

We are constantly mislead by the ease with which our minds fall into the ruts of one or two experiences.

— William Osler

I think nobody should be certain of anything. If you're certain, you're certainly wrong because nothing deserves certainty, and so one ought to hold all one's beliefs with a certain element of doubt and one ought to be able to act vigorously in spite of the doubt.

—Bertrand Russell

Knowledge comes but wisdom lingers.

—Tennyson

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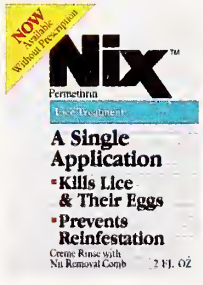
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Cocaine-Induced Mesenteric Ischemia

Tracy J. Martin, M.D.

Emergency department physicians are now seeing a wide variety of complications associated with cocaine abuse. Acute myocardial infarction, cardiac arrhythmias, rupture of the ascending aorta, stroke, subarachnoid hemorrhage, seizure, and sudden death are well documented occurrences. A rarer adverse effect of the drug is mesenteric ischemia. The first documented case, using "free-based" cocaine, was reported in 1984 by Fishel, et al.[1] Nalbardian described two other cases caused by cocaine ingestion;[2] and Mizrahi reported a fourth case in which the intranasal route was used.[3]

Our Patient

The problem of possible mesenteric ischemia from cocaine abuse was brought to our attention when a 30-year-old white male presented to our emergency department with a chief complaint of right lower quadrant pain for two weeks which was worse after heavy intranasal cocaine abuse. He also complained of nausea, vomiting, diarrhea, and anorexia. The patient denied dysuria and penile discharge. His last cocaine consumption was the day prior to presentation. Past medical history was significant only for intranasal cocaine use. The patient's vital signs were: temperature 99.4, heart rate 100, RR 78, blood pressure 132/80. Physical exam was unremarkable except for the abdominal exam. The abdomen was soft with bowel sounds in all four quadrants, moderate tenderness was noted in the right upper and right lower quadrants; and there was mild guarding without rebound. Positive psoas and obturator signs were noted. Stool was brown and heme occult positive. The white blood cell count was 11,300 with 78 neutrophils and 8 "bands." Electrolytes and urinalysis were normal. Serum amylase was 124. The KUB was read as a "mild ileus pattern" with a few scattered air/fluid levels. A preliminary diagnosis of appendicitis was made, but at surgery no abnormalities were found. There were no segments of ischemic bowel.

Postoperatively, the patient continued to have significant abdominal pain, vomiting, and diarrhea. An upper gastrointestinal series with small bowel follow-through was negative except for a few distended bowel loops. The patient's WBC count remained normal, but an increasing number of immature cells were found daily.

A history was finally elicited from the patient that he had continued to use cocaine while in the hospital (up to three times a day). The patient noted that the abdominal pain would increase with the use of cocaine. We urged him to stop cocaine consumption, allowed no visitors, and monitored his activities carefully. His abdominal pain stopped within 24 hours and the patient was discharged home. Interestingly, since his hospitalization the patient has been to the emergency department at least four times for abdominal pain following cocaine abuse.

Discussion

Gastrointestinal complications from cocaine are apparently well known to the cocaine abuser, but usually minor, involving diarrhea, nausea and vomiting. A life-threatening complication, mesenteric ischemia, has been reported and confirmed by laparotomy four times previously. Although the laparotomy in this case was negative, we believe that cocaine was responsible for this patient's abdominal pain secondary to the close temporal association of the cocaine to the pain.

The previously documented cases with ischemic bowel required: a small bowel resection (undisclosed amount and location) following intranasal usage; right hemicolectomy following "free-basing"; and successive small bowel resections totaling 130 cm of ileum and an ascending colectomy following ingestion.[1-3] The patient requiring multiple operations died of gram negative septicemia. One patient was observed to have discolored bowel which improved with 100% oxygen and did not require resection. The route of cocaine intake apparently does not matter, as intranasal, "free-basing," and ingestion were the various methods used in these cases.

From the Department of Emergency Medicine, Carolinas Medical Center, Charlotte 28203.

Interestingly, there are no reported cases of mesenteric ischemia from "body packers." Perhaps this is because the patients who survive either pass the packets of cocaine or have them surgically removed. Death from acute intoxication following the release of packet contents most likely ensues from a cardiopulmonary or central nervous system terminal event[4-6] rather than from bowel ischemia and sepsis.

The proposed mechanism of action is derived from the pharmacology of the drug. Cocaine is a central nervous stimulant, local anesthetic, and pyrogenic agent, and acts on the sympathetic nervous system to block the re-uptake of catecholamines. Mesenteric vessels contain alpha-adrenergic receptors which respond to vasoactive substances by increasing resistance, and thereby decreasing flow.[7] It is theorized that cocaine potentiates the normal adrenergic response causing vasoconstriction.

Cocaine induced vasoconstriction has been documented in human coronary artery studies.[8] Cocaine induced myocardial infarctions were initially thought to be always related to underlying coronary artery disease; this has since been disproved.[9] No studies have been done examining cocaine affected mesenteric vessels, but because of the relatively young age of the patients, it is unlikely that there existed any underlying atherosclerotic disease. Therefore, in mesenteric ischemia, as in coronary ischemia, cocaine probably causes vasospasm most commonly in non-diseased vessels.

In our patient and in one patient whose case was previously reported (requiring no bowel resection), the ischemia appears reversible. What causes the ischemia to become irreversible is unknown. It can be theorized that an overwhelming dose of cocaine may prevent the hepatic esterase degradation system from completely eliminating the drug in a timely fashion. ❑

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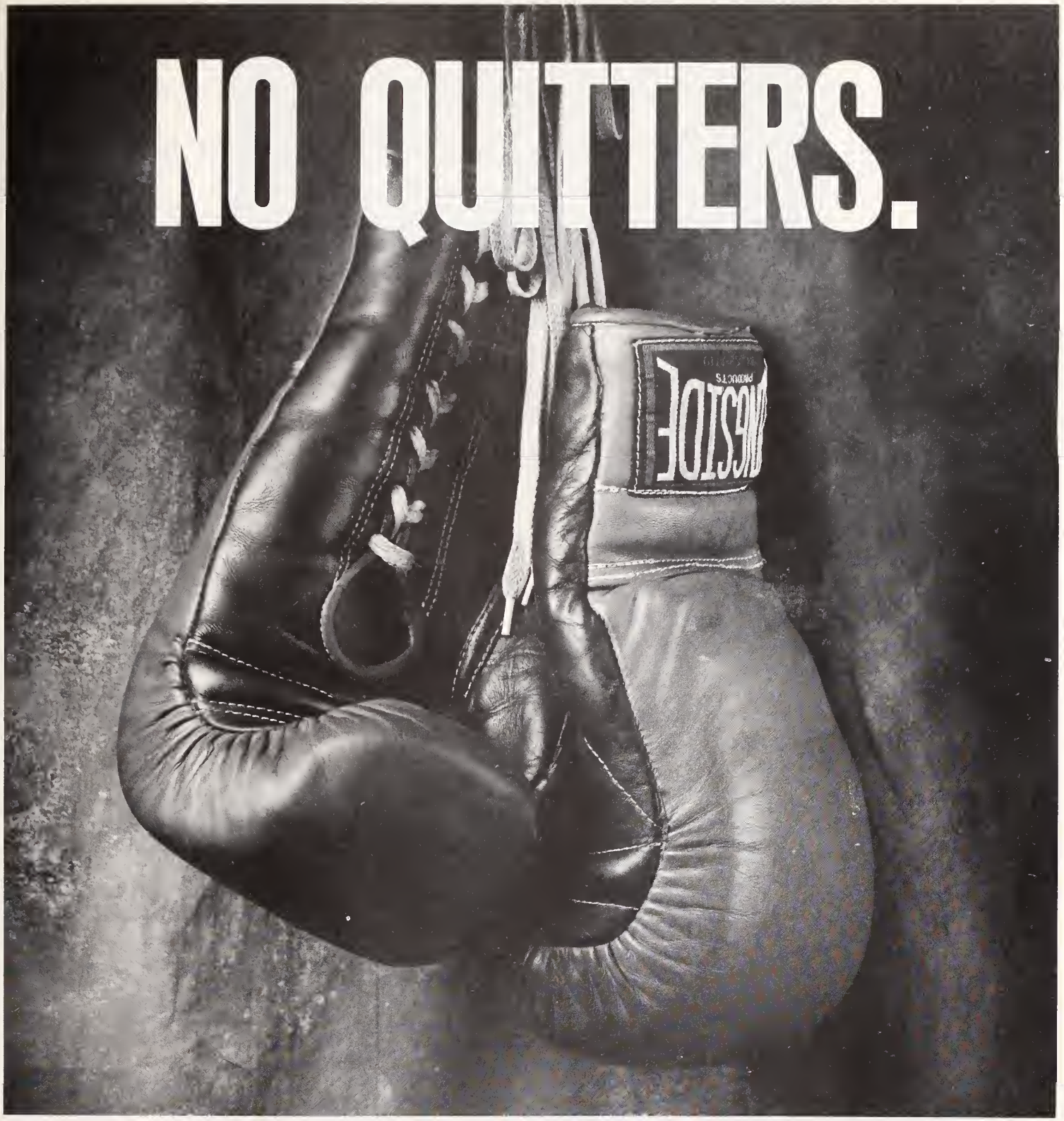
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EDITORIAL

Out-of-Hospital Do Not Resuscitate Orders in North Carolina

Donald E. Vaughn, M.D., and Jeffrey W. Runge, M.D.

No reason had we to care for life.
They whipped and scourged us
as they pleased.

Ts'ai Yen (c. A.D. 200)[1]

Throughout the medical literature one hears the phrase "medically indicated" in reference to procedures and diagnostic tests. This means that there are specific situations in which medical technology should be applied for the benefit of the patient. In the early 1960s, cardiopulmonary resuscitation (CPR) and defibrillation were developed for the reversal of ventricular fibrillation, specifically in situations such as ischemic heart disease and drowning. Over the next decades CPR became a broad spectrum "cure" for death and was used in the majority of patients suffering cardiopulmonary arrest of any etiology. There no longer seemed to be limited indications for this dramatic and extraordinary procedure.

This situation became even more pronounced in the prehospital environment, as emergency medical service (EMS) systems were upgraded, and defibrillation, endotracheal intubation and the use of cardiac drugs were added to augment CPR for resuscitation. EMS providers operate on strict protocols written by medical control physicians, since there are seldom physicians present in the prehospital setting to apply the judgment and experience implicit in the practice of medicine.

Almost all EMS systems use the American Heart Association guidelines for the initiation of CPR. Under that protocol, all pulseless and non-breathing patients receive cardiopulmonary resuscitation, except those meeting specific criteria for irreversible death: obvious rigor mortis, decapitation or decomposition. Strict application of this rule frequently leads to care which may be inappropriate in cases of individuals in the end stages of terminal illness. As pointed out by Haynes and Neimann in an editorial in the *Journal of the American Medical Association*, "these criteria all address the determination of death, not the appropriateness or desirability of resuscitation, and certainly not whether the patient would welcome the intervention."[2] When required to initiate CPR on all patients not meeting the criteria above, the EMS provider is often put at odds with families who desire no CPR, but who, in the stress of the nearing death of a loved one, called 911.

Physicians involved in EMS became concerned about the lack of rational indications for CPR in the prehospital setting. Living wills and the use of do not resuscitate (DNR) documents in the hospital did not address the problems of EMS providers outside the hospital setting, where irreversible death criteria could be superceded only by direct order of the patient's attending physician. Once started, full resuscitation was automatic, by protocol, using all the technology and expense necessary to delay the dying process. When that happens, regardless of the outcome, the EMS provider is often confronted with very understandable feelings of futility and ethical misgivings.

In a previous edition of the *Journal*, Dr. George Barrett and Julian D. Bobbitt have written editorials on death with dignity from both a medical and a legal viewpoint.[3,4] They describe the three-part *Layman's Guide to Death With Dignity*, which allows patients to contribute to decisions made about their care. We present this report on out-of-hospital DNR Orders on behalf of the North Carolina Medical Society Bioethics Committee and the North Carolina Chapter of the American College of Emergency Physicians (NC-ACEP), which supports the use of the document. This is similar to other advance care directives, in that it is based on the individual's fundamental right to control decisions related to his or her medical care. This right has been affirmed by the courts and supported by a presidential commission.[5]

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The problem of the EMS provider lies in the method by which patients with terminal and incurable illness can be identified. This was an expressed concern of NC-ACEP members due to both experience in the emergency department and involvement with EMS systems throughout the state. Potential solutions to the problem were sought by NC-ACEP in 1989, and a tentative plan was developed using National ACEP's position paper on guidelines for DNR in the prehospital setting.[6] Because this is a statewide issue, the development of a do not resuscitate document for out-of-hospital care was requested of the Bioethics Committee of the North Carolina Medical Society. This task was accepted by the committee, and a subcommittee was created by its chairman, Dr. George Barrett, to develop both advance care directives and guidelines for out-of-hospital DNR. This subcommittee was composed of all types of healthcare workers who help those in the last months of life.* Involved were physicians, nurses, emergency medical personnel, clergy, ethicists, attorneys, and representatives of nursing homes, hospice, home health agencies and hospitals.

The major task of the subcommittee was to develop a form that could identify a terminally ill patient in the out-of-hospital situation and that could be recognized by EMS providers statewide. The resulting form is similar to the forms used for inpatient facilities, except that the out-of-hospital DNR order contains the essential medical determination by an attending physician that the patient has a terminal and incurable illness, thereby making the use of CPR for that patient extraordinary care. This determination is needed to allow use by prehospital EMS personnel, since the decision to withhold CPR cannot be made solely by the prehospital provider. This difficult decision must be made by both the attending physician and the patient prior to the need for CPR. Until the creation of this new out-of-hospital DNR document, inpatient DNR directives were of no value outside the hospital door. So if EMS was activated, the patient received CPR and any advanced life support procedures available to the EMS unit.

The DNR form created by the Bioethics Committee was reviewed by the North Carolina Attorney General's office in December 1990 and found to be valid if properly executed. This allows EMS personnel to withhold cardiopulmonary resuscitation for patients with this form without incurring liability. The Attorney General saw no reason the living will statute should be restricted to the inpatient environment.[7] The statutes, however, restrict this application to individuals who are incurably and terminally ill and in whom cardiopulmonary resuscitation is extraordinary treatment.

EMS provider organizations and their medical directors may implement the program at their option. There is a single uniform DNR form distributed by the North Carolina Medical Society, and it covers the three common circumstances in which prehospital personnel encounter the terminally ill patient:

1 an incurably and terminally ill patient who does not have a living will or other advance care document and who is either (a) comatose or (b) mentally incompetent;
2 an incurably and terminally ill patient who has an advance care document and who is either (a) comatose or (b) mentally incompetent;
3 an incurably and terminally ill patient who is mentally competent.

The form identifies the patient, declares the patient's or responsible person's wishes regarding CPR, states the necessary medical determination by the attending physician, and contains specific DNR orders. There is to be only one copy of this form, and it must be present by the patient's bedside in order to prevent unwanted CPR.

The use of the form presupposes that the most essential component of the process has been performed by the patient's attending physician, namely, that the patient and family have been thoroughly counseled and understand the terminal nature of the illness, and the patient wishes not to be resuscitated in the event of death. Many patients and families may elect to do everything possible to delay death, and the lack of a DNR document and calling EMS will thus bring a full resuscitative effort.

Other areas of the country have employed DNR forms. New York State recognizes the validity of prehospital DNR orders written on hospice stationery, signed by a physician, and kept in a patient's home, allowing EMS providers to accept such orders without telephoning the physician. Anchorage, Alaska, has used a list in the hospital to identify DNR patients since the early 1980s. Minneapolis has used DNR orders for nursing home patients.[8]

Physicians search for "safe harbors" in medicolegal matters which may cover all of the possible legal avenues but may overlook the patient. Another useful way to view this might be by the old phrase, "A ship in the harbor is safe, but that is not what ships are for." We hope that we have created a smoother sail into these formerly perilous and uncharted waters.

This document is offered by the Bioethics Committee as another way to allow rational application of medical technology and the patient's ability to exercise the freedom to participate in end-of-life decisions. We want medical technology to be applied for the benefit of our patients, not because of constraints in the system. Those of us active in EMS desire to provide the best, most humane care for the patient. Those with terminal and incurable illness may be spared unneces-

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* Members of the subcommittee included, from the North Carolina Medical Society: George C. Barrett, M.D., Donald E. Vaughn, M.D., C. Glenn Pichard, Jr., M.D., David Lennon, M.D., Darlyne Menscer, M.D., William J. Spencer, M.D., Kathleen A. Cline, M.D., and Patricia K. Hodgson; from Hospice of North Carolina: Judy Lund; from Davidson College: Rosemarie Tong, Ph.D.; attorneys Julian D. Bobbitt, Jr., J.D., and Kieth Korenchuk, J.D.; from the Office of Emergency Medical Services: Bob Bailey; from the North Carolina Health Care Facilities Association: Vickie Haywood, R.N.; from the North Carolina Hospital Association: Wyatt E. Roye; from the North Carolina Association for Home Care: Gary Bowers; from the North Carolina Nurses Association: Jane Castle, R.N.; and The Rev. D. Scott Lindsay, D.Min.

sary and unwanted suffering if identified by the DNR document. Contact your local EMS system medical director to see if your county has accepted the out-of-hospital DNR form. Tell our EMS providers what your patient needs! ❑

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Edward C. Halperin, M.D., Book Review Editor

***Neurologic Emergencies: Recognition and Management*, second edition, edited by Michael Salcman. NY: Raven, 1990.**

Reviewed by Virginia W. Pact, M.D., Henderson Neurology Center, 1801 Ruin Creek Road, Suite 105, Henderson 27536.

One's initial encounters with the rapidly deteriorating head injury patient can be frightening if not downright intimidating. Neurology texts do not in general suffice to supply the background knowledge needed to deal quickly and effectively with neurologic emergencies. These emergencies are becoming more common. Rapid recognition and management can make the difference between recovery, disability or death.

Neurologic Emergencies: Recognition and Management, edited by Michael Salcman, is a balanced text intended for emergency physicians, internists and pediatricians as well as neurology house staff. There are contributions from many authors representing the disciplines of neurology, neurosurgery, pediatrics, and the basic sciences.

The first three chapters take up general considerations such as the pathophysiology of different types of brain injuries and brain edema. A discussion of the examination of a patient with depressed level of consciousness reviews the various stages of the rostral-caudal deterioration and suggests a systematic approach to the unconscious patient.

Two subsequent chapters encompass subarachnoid hemorrhage and neoplastic emergencies. Both of these chapters are very well written and interesting. Much has changed in the management of subarachnoid hemorrhage since my residency training. The wealth of statistical information, tables and flow sheets helps me feel comfortable with the modern management of this very serious condition.

Management of the acute head injury patient is covered in a detailed chapter beginning with discussion of the pathophysiology of primary and secondary head injury. The authors discuss and compare the Glasgow Coma Scale and the Maryland Coma Scale. The last sections, on suggested protocols for the management of head trauma and on major medical problems associated with the severe head injury, are full of clinically useful information.

The chapter on spinal cord injuries covers epidemiology and basic mechanisms of injury as well as diagnosis, radiology and management. Excellent tables and diagrams help simplify the complicated neuroanatomy so essential for accurate diagnosis and timely management.

The emergency management of seizures in adults includes a short discussion of the classification of epilepsy, the evaluation of a patient with epilepsy, followed by a section on the management of status epilepticus. This chapter is packed with useful information and clinical pearls usually found only in more diverse places.

The chapter on bacterial meningitis is straightforward and easy to read. The authors discuss pathology, clinical presentation, diagnostic studies and treatment. Neurologic sequelae are included, as is a section on prevention. I think it would be very useful to include a discussion of brain abscess, subdural empyema and septic emboli perhaps under the heading of cerebral infections.

The chapter on toxic and metabolic encephalopathies is an excellent introduction to the approach to the comatose patient. There is a well organized, systematic discussion of the presentation and treatment of various drug overdoses. Metabolic causes of encephalopathy are similarly well covered. Altered consciousness associated with cancer, AIDS and substance withdrawal are discussed. I was very pleased to see a discussion of neuroleptic malignant syndrome so often left out of neurology texts.

The last two chapters are devoted to pediatric neurological and neurosurgical emergencies. Although there is much that is similar to adults, conditions and considerations unique to children are well covered here. The reader is led through the examination of a newborn, seizures in the newborn, febrile seizures and Reye's syndrome. Growing fractures, hydrocephalus and dysraphic syndromes are also discussed.

As with many texts with multiple authors, some chapters are more readable than others. On the whole I found this

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book interesting and very useful. I would highly recommend this text for anyone who cares for patients with neurologic emergencies.

***When a Family Gets Diabetes: To Be Illustrated by Children and Adults*, by Marge Heegaard and Chris Ternard. Minneapolis: DCI Publishing (Ridgedale Office Center, Suite 250, 13911 Ridgedale Drive, Minneapolis, MN 55343).**

Reviewed by Edward C. Halperin, M.D.

This gentle paperback, approximately 50 pages long, provides a coloring book for children and their families with diabetes. The book helps to lead children through the commonplace feelings that occur with serious illness, contact with the medical profession, and the need for therapeutic intervention. Using art, children are encouraged to express their feelings about insulin shots and feeling sick.

This is a wonderful volume and highly recommended to those pediatricians who deal with children with diabetes. At $6.95 per copy, however, it may be too expensive for bulk purchase and free distribution to patients. ❑

Special Issue

Women's Health

The September issue of the *Journal* will be a special issue on topics in women's health.

Guest edited by Dr. Margaret L. Bertrand of Bertrand Diagnostic Imaging and Breast Center (Greensboro), the issue will feature articles on: rural outreach for breast cancer detection; breast preservation; infertility treatment; adolescent pregnancy; contraceptive development in the U.S.; upper extremity disorders; insurance coverage for the screening Pap smear and mammogram; and more.

This very special issue promises to continue the *Journal's* goal of bringing our readers interesting and informative special issues guest edited by a variety of North Carolina physicians. In the past four years, we have been pleased to produce special issues on breast cancer (1988), psychiatry (1988), sexually transmitted diseases (1989), the Area Health Education Centers Program (1989), and preventive medicine (1990).

The September special issue on women's health offers topics of interest to all of our readers—both doctors and their patients—who are concerned about the health of women in North Carolina.

FOR PATIENTS

NORTH CAROLINA MEDICAL SOCIETY

Health Watch

VOLUME 52 / NUMBER 9 / SEPTEMBER 1991

Child Nutrition

GOOD NUTRITION CAN MAKE THE DIFFERENCE FOR YOUR CHILDREN

Linda Worsham, MPH

Did you know that the way your children are fed is directly related to several important areas of their lives? These areas include:

1. Growth
2. Self Esteem
3. Feeling of Security
4. Classroom Performance
5. Level of Irritability
6. Level of Inquisitiveness
7. Incidence of Infectious Disease
8. Severity of the Infectious Disease
9. Recovery Time from the Infectious Disease
10. Development of Chronic Disease Later in Life

Parents have the tough assignment of putting together a workable nutrition strategy that will make a positive difference in the family's health and well-being. The purpose of this article is to give you, as a parent, some practical, realistic information that can help you be successful in providing good nutrition for the first eighteen years of your children's lives.

Ms. Worsham is a supervisor for training and nutrition with Child Nutrition Services of Wake County Public Schools, 3600 Wake Forest Road, Raleigh 27611.

First evaluate your current plan

Check the growth charts

Before you consider making any changes in the way you are feeding your children, take a few minutes to evaluate what you are doing now. First check on their growth status. You can do this by asking their physician to review their growth charts with you. These charts plot children's linear growth (length for infants or height for older children) and weight changes. The charts compare their growth to the amount of growth expected for children that age. They can also compare height to weight. Growth along normal curves indicates that your nutrition plan is probably on the right track and that you may only need to make a few changes in your plan. If your children's linear growth is not along normal curves, ask your physician why. Growth rates can be slowed by the

physical stress of illness, by certain medications, by emotional stress and by poor nutrition.

Ask your physician to evaluate your children's weight status based on the growth chart information. Parents need a physician's input because overweight parents may tend to think that a "large" child is appropriate. Likewise, a parent who has deep personal concerns about thinness may feel that their child is not thin enough. Therefore, your physician's evaluation of weight status is necessary.

Check the food selection scorecard →

If your children are at least two years old, use the accompanying scorecard to grade their intake. First write down everything they eat and drink during a twenty-four (24) hour period. If they attend day care, you probably keep up with the center's menu. But you will still need to check with the center to find out what they actually ate. If your children attend school, ask them what they had to eat and drink. Remember to include any snacks or treats. Check Table 1: Foods Rich in Vitamins A and C to see if they had a serving of a vitamin A food and a vitamin C food. Do not count vitamin pills. Use the list of foods and beverages to complete the scorecard. At the bottom of the scorecard record all of the "extra foods." A score of 100 is the ideal. A score of 60 or below is cause for alarm.

Make a plan

The 1990 dietary guidelines for Americans

Now that you have some indication of your children's needs, you can use the seven simple recommendations in the following 1990 Dietary Guidelines for Americans to help you choose healthier diets for anyone over two years old. These guidelines have been established and distributed through federal government agencies in order to help prevent and/or solve nutrition problems and to help reduce the age at which people develop chronic diseases. These recommendations are:

1. Eat a variety of foods.
2. Maintain a healthy weight.
3. Choose a diet low in fat, saturated fat and cholesterol.
4. Choose a diet with plenty of vegetables, fruits and grain products.
5. Use sugar only in moderation.
6. Use salt and sodium only in moderation.
7. If you drink alcoholic beverages, do so in moderation.

Each of these recommendations is discussed below. Refer to your nutrition scorecard information as you consider each of the guidelines.

Food selection scorecard

Food Group and Recommended Intake	Your Intake from Group (Write Food and Amount)	The Score
Fruits and vegetables - 4 or more servings (serving = 1/4 for preschool - 8 years, 1/2 cup over 8 years old) Have at least one raw daily		
1 serving Vitamin A rich fruit or vegetable 1 serving = 10 points (no more than 10 points)		
1 serving Vitamin C rich fruit or vegetable 1 serving = 10 points (no more than 10 points)		
Other fruits and vegetables including potatoes = 2 1/2 points each		
SUBTOTAL (No more than 25 points allowed)		
Grains (Breads and Cereals) - 4 or more servings of whole-grain or enriched (serving = 1 oz. dry weight cereal or 1 oz. bread or 1/2 cup rice or pasta)		
1 serving cereal or 2 servings of any other bread = 10 points (no more than 10 points)		
Other servings from the bread/grain group = 5 points each		
SUBTOTAL (No more than 25 points allowed)		
Milk and milk products ages 2 through 10: 3 or more servings ages 11 through 24: 4 or more servings adults: 2 or more servings (serving = 1 cup fluid milk or 1 1/3 oz. cheese or 1 pint ice milk)		
For ages 2-10: 1 serving = 8 1/3 points For ages 11-24: 1 serving = 6 1/4 points		
SUBTOTAL (No more than 25 points allowed)		
Meat & meat alternates - 2 or more servings (serving = 2-3 oz. of lean meat, fish, poultry Protein equivalents = 2 eggs, 2 oz. hard cheese, 1 cup cottage cheese, 1 cup legumes, 4 tbsp. peanut butter, 1 oz. nuts or sunflower seeds) Count cheese as milk or meat but not both		
1 serving = 12 1/2 points		
SUBTOTAL (No more than 25 points allowed)		
GRAND TOTAL (No more than 100 points allowed)		

The above foods are foundation foods. List additional foods and beverages below.

Eat a variety of foods

Over 40 different nutrients are required for good health. No food has all of these nutrients so it is important to introduce your children to a wide variety of foods. There are several good ways to encourage children to taste new foods. Reward them with a smile when they try a food that is new to them. Involve them in planning the meal or snack. Better yet, allow them to help prepare the new food. DO NOT FORCE them to try a new food. Instead suggest to them that when they get older they will probably like the food. Encourage them to eat at the day care center and at school. These meals will expose them to new foods. Finally, let them see you eating the food. Your example is the best teacher!

Maintain a healthy weight

If your children have been diagnosed by the physician as being overweight, its time to make some changes. First look at their activity level. You may need to resort to the removal of video games and the television from your home. Find ways to increase their activity level through outdoor activities. They can also help with the family chores to increase activity. Changes in food intake require careful thought. Do not provide children with less than the required number of servings from the foundation foods because these foods are a must for their growth and development. Instead, reduce the amount of fat and sugar by changing the way foods are prepared and the type of foods available for snacks.

Table 1: Foods Rich in Vitamins A and C Vegetables and Fruits

Include a Vitamin A Vegetable or Fruit Daily

1/4 cup serving Very High

- Beet greens
- Carrots
- Chard, Swiss
- Chili peppers, red
- Collards
- Cress, garden
- Dandelion greens
- Kale
- Mangoes
- Mixed vegetables (frozen)
- Mustard greens
- Peas and carrots (frozen)
- Peppers, sweet red
- Pumpkin
- Spinach
- Squash, winter (acorn, butternut, Hubbard)
- Sweet potatoes
- Turnip greens

1/4 cup serving High

- Apricots
- Broccoli
- Cantaloupe
- Chicory greens
- Papayas
- Purple plums (canned)

1/2 cup serving Moderate

- Asparagus, green
- Cherries, red sour
- Chili peppers, green (fresh)
- Endive, curly
- Escarole
- Nectarines
- Peaches (except canned)
- Prunes
- Tomatoes
- Tomato juice or reconstituted paste or puree

Include a Vitamin C Vegetable or Fruit Daily

1/4 cup serving Very High

- Acerola
- Broccoli
- Brussels sprouts
- Chili peppers, red and green
- Guavas
- Orange juice
- Oranges
- Papayas
- Peppers, sweet, red and green

1/4 cup serving High

- Cauliflower
- Collards
- Cress, garden
- Grapefruit
- Grapefruit juice
- Grapefruit-orange juice
- Kale
- Kohlrabi
- Kumquats
- Mangoes
- Mustard greens
- Pineapple juice (canned-vitamin C restored)
- Strawberries
- Tangerine juice
- Tangerines

1/4 cup serving Moderate

- Asparagus
- Cabbage
- Cantaloupe
- Dandelion greens
- Honeydew melon
- Okra
- Potatoes (baked, boiled or steamed)
- Potatoes (reconstituted instant mashed-vitamin C restored)
- Raspberries, red
- Rutabagas
- Sauerkraut
- Spinach
- Sweet potatoes (except those canned in syrup)
- Tangelos
- Tomatoes
- Tomato juice or reconstituted paste or puree
- Turnip greens
- Turnips

Your children's weight is also affected by your attitudes toward foods. Allow them to refuse food that they don't want. Allow them to leave food on their plate. Do not remind them of all the starving children in the world. The food on their plates can not be shipped to these children. Forcing food on children only creates negative feelings that can contribute to obesity, anorexia and/or bulimia. Avoid using snacks as a way of entertaining bored children. Likewise, use mealtime as a time to have friendly chats rather than a time to watch television together. Make sure that there is a specific place in your home where eating is to take place. Eating at the table is a good, lean habit. Finally, learn to reward your children with a smile or a hug rather than a sweet. You will be glad that you did.

Choose a diet low in fat, saturated fat and cholesterol

We know now that a diet low in fat contributes to the health and well being of all Americans over the age of two. There are several easy ways to control fat. Use skim or 1% fat milk. Use vegetable oils (not tropical oils) instead of butter, cream or hydrogenated margarine. Cut back on mayonnaise, creamy salad dressings, sour cream and cream cheese. Use fish, poultry or vegetable protein such as lentils or beans two or three times a week. Use lower fat lunch meats or sliced lean meats. Use fewer breaded meats, fish or poultry. Buy water packed canned fish. Drain fat from meats as you cook them. Avoid fried meats. Watch the portion sizes of meats; two to three ounces per serving is all that is needed. Replace potato chips with pretzels. Consider fresh fruit for dessert rather than baked products. Limit the number of eggs to two per week for normally healthy children.

Watch for hidden fats. Look at the food selection scorecard again. If you were to place each of these foods on a brown paper towel, how many foods would leave a grease mark on the towel? Begin substituting those foods with foods that are lower in fat.

Choose a diet with plenty of vegetables, fruits and grain products

When your children's daily foods include wide varieties of fruits, vegetables and grains, they will earn the following health benefits:

1. Increased dietary fiber
2. Increased complex carbohydrates
3. Increased vitamins A, B and C
4. Decreased fat

If you have ever observed the foods that people buy in the grocery store, you know that most people buy very few fresh vegetables other than iceberg lettuce and potatoes. Breads purchased tend to be white enriched bread. Cereals are often sugar coated. Work toward spending more of your grocery dollar on fresh fruits and vegetables. Try whole wheat or a mixed grain bread. Finally, work on your attitude toward complex carbohydrates (starches). They are not the foods that cause overweight. It is the excessive sugar, the high fat, the excessive meat and the lack of exercise that causes overweight.

Use sugars only in moderation

The problem with sugary foods is that they can lead to tooth decay. Because children feel full quickly, foods such as candy, table sugar and carbonated beverages can take the place of more nutritious items. One of the most effective ways to reduce sugar in your children's diet is to decrease the number of carbonated beverages. Although switching to artificially sweetened carbonated beverages would reduce sugar, it does not take care of another concern. Nutritionists are seeing a relationship between carbonated beverages and bone fractures. So reducing the intake of such beverages is a doubly good idea. Sugar in the diet can also be reduced by purchasing fruits in juice pack or light syrup pack. The number of dental caries may also be reduced by making sure that your children brush their teeth after each meal and snack.

Use salt and sodium only in moderation

About one in every five people is sodium/salt sensitive. This sensitivity contributes to high blood pressure. The best way to reduce the amount of salt in your children's diet is to reduce the amount you use for seasoning by one half. You can make up for the flavor loss by using a small amount of lemon juice or lime juice. If you use more fresh fruits and vegetables for snacks rather than chip items, then you are well on your way to reducing salt in the diet. You may also want to have your water tested for its sodium level. If you have a water softener (which adds sodium to your water), you may want to consider having it attached to your hot water supply only. Finally, you can reduce salt in the diet by reducing the number of processed foods you serve.

If you drink alcoholic beverages, do so in moderation

You may find it astounding that this guideline is included in an article about nutrition for children. However, it needs to be said one more time that you as parents teach your children by what you do, not what you say. Certainly, alcoholic beverages are neither recommended nor legal for people under the age of 21. If alcohol is a problem for you or is used by your children who are under 21, seek professional help.

Summary

What children eat and how they are fed has a direct impact on their health and well being. While they are growing up, they are also learning how to eat. Parents are the most effective nutrition educators. Parents teach by what they eat, by what they buy and by what they offer to their children. Parents also teach about nutrition by their attitudes. Help your children learn that eating can be a delightful, tasty celebration of health. ❑

Alopecia Areata

William M. Hendricks, M.D.

Alopecia areata is a common hair disorder that afflicts over two million American men and women. All races and ages may be affected, especially young adults. Alopecia areata is characterized by recurrent episodes of patchy hair loss that usually involves the scalp, although the beard, eyebrows, eyelashes, or any hair-bearing part of the body may be affected. Rarely, all of the hair on the scalp may be lost (**alopecia totalis**) or all of the hair on the body (**alopecia universalis**). Most people who have alopecia areata have their first episode before they are 25 years old, and about one in five has a family history of the disorder. For unknown reasons, children with Down syndrome (trisomy 21) are especially prone to alopecia areata.

What does alopecia areata look like?

Usually the first thing that a person will notice while washing or combing the hair is a nickel-size patch of hair loss. The scalp itself, however, appears normal. This patch may enlarge, and new adjacent rings of hair loss may develop and run together. This produces irregular areas of loss that can vary considerably in size. Sometimes the patches are slightly tender or itchy, especially during active periods of hair loss. Occasionally, the hair will seem to fall out by the handful. Some people may have small dents or pits on the surface of their nails, or very rarely, they may develop more extensive nail changes. Fortunately, however, alopecia areata does not affect a person's general health.

Dr. Hendricks is President of the Dermatology Section of the North Carolina Medical Society. Asheboro Dermatology Clinic, P.A., 407 S. Cox St., Asheboro 27203.

Why did this happen to me?

The cause of alopecia areata is not known. It is not contagious and is not due to a vitamin deficiency or poor nutrition. Occasionally, psychological stress may be associated with bouts of the disorder. People with alopecia areata and their families have a higher incidence of thyroid diseases, vitiligo, pernicious anemia, early-onset diabetes, and Addison's disease. Various allergic disorders such as asthma, hay fever, and atopic eczema, as well as autoimmune diseases such as systemic lupus erythematosus and rheumatoid arthritis, are also more common. This suggests that the hair loss seen in alopecia areata is caused by some type of "self-allergy."

Under the microscope there are small white blood cells called T-lymphocytes encircling affected hair follicles like a swarm of bees. This inflammation appears before the hair begins to fall out. There may also be antibodies against some part of the hair follicle. The affected hair follicles, however, are still alive below the skin surface even after the hair falls out, and can be stimulated to regrow hair. In fact, hair will regrow in some people within a few months or a year even without treatment.

Treatment

Mild patchy alopecia areata usually responds to **injections of cortisone** (triamcinolone acetonide). Your doctor will inject small amounts of cortisone with a tiny needle into the skin in and around the bare areas. These multiple injections are repeated every four weeks until the hair begins to regrow. This usually occurs within four to six weeks. New hair may be thin at first and white in color. Gradually the color and texture of the hair will return to normal. Cortisone injections, however, do not prevent the development of new areas of hair loss. Sometimes a small indentation may develop in the skin at the site of a cortisone injection, but this usually will fill in by itself with time.

Anthralin (Anthra-Derm, Drithocreme, Dritho-Scalp, Lasan) is a synthetic tar-like substance used in the treatment of alopecia areata. Anthralin should be applied to the bare areas

daily for only 30 to 60 minutes, since it is somewhat irritating to the skin and can cause a purple-brown discoloration of the skin, hair, and nails. Please be patient, since it takes at least three or four months for anthralin to begin to work.

Minoxidil (Rogaine) has also been used with some success in alopecia areata. Minoxidil was originally developed for people with severe high blood pressure. Fortunately, one of its unexpected side effects—stimulation of hair growth—was recognized, and it is now used in the treatment of pattern baldness (androgenetic alopecia) and alopecia areata. It does take six to 12 months, however, to see if it is going to work.

If greater than 50% of the scalp hair is lost or if the hair loss is rapidly progressing, **cortisone pills** or **intramuscular injections of cortisone** may be used, often in combination with the three previous therapies. **Allergic contact sensitization** using **dinitrochlorobenzene (DNCB)** or **squaric acid dibutylester, light therapy with psoralens plus UVA light** (i.e., PUVA therapy), and **cyclosporine** are sometimes helpful.

Extensive alopecia areata, however, is difficult to treat, and may not respond to therapy. For this reason, some people with severe alopecia areata, alopecia totalis, or alopecia universalis may want to consider wearing a wig. Wigs can usually be styled so that they appear natural and can be secured to the scalp with special double-sided sticky tape or suction cups.

Support Groups

People with alopecia areata may contact the National Alopecia Areata Foundation, 714 C Street, Suite 216, San Rafael, CA 94901 (1-415-/456-4644). ❑



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Nickel Allergy

William M. Hendricks, M.D.

Nickel allergy is the most common cause of metal allergy in the United States. It may appear at any age and is ten times more common in women than in men. Women are frequently sensitized to nickel after they pierce their ears or wear costume jewelry, eyeglass frames, wrist watches, metal buttons, etc. In the past men used to become allergic to nickel mostly through exposure at work. Today jewelry is probably the most important source of nickel allergy in men.

The reason some people become allergic to nickel and others do not is not known. People who develop an allergy to nickel will keep it for years, although it gradually may become less severe if they avoid nickel-containing objects. If you are highly allergic to nickel, a red itchy rash may appear after brief exposure to any nickel-containing object. Other people may require prolonged exposure before they break out in a rash. Other factors that may make nickel allergy worse include pressure, friction, and perspiration. Pressure and friction increase the skin's exposure to nickel, while sweat dissolves some of the nickel in jewelry, bringing it into contact with the skin. This is the reason that some people can only wear jewelry during the winter months when they do not perspire very much.

What has nickel in it?

Nickel is used in many metal alloys and in nickel-plated products including hair pins, hair curlers, bobby pins, eyelash curlers, earrings, eyeglass frames, lipstick holders, necklace clasps, necklaces, identification tags, garter clasps, bra straps, thimbles, coins, needles, pins, scissors, watch bands, bracelets, buckles, buttons, zippers, chairs, tables, door knobs, handles, handbags, umbrellas, orthopedic devices, cardiac pacemaker electrodes, steel sutures, bullets, shrapnel, etc. Most jewelry, especially costume jewelry, contains some nickel, although 14 karat and 18 karat gold jewelry generally have less nickel in them. This is the reason that some people can wear high quality gold jewelry but are not able to wear inexpensive costume jewelry.

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Prevention

The most important thing that you can do is to avoid nickel in your environment. Women who are allergic to their wedding rings may try wearing them for short periods of time on special occasions, providing that they apply a cortisone cream to their finger before slipping on their rings. Adhesive or cellophane tape may also be applied to the metal object, or it may be coated with polyurethane to prevent metal contact with the skin. Clear nail lacquer has been tried, but unfortunately, many people become sensitive to it. Talcum powder or some other type of absorbent powder may also be placed under metal objects to help prevent allergic skin rashes.

Nickel-free earrings and jewelry are readily available.* Please keep in mind that the word "hypoallergenic" does not always mean that the jewelry is nickel-free. Be certain that the person who pierces your ears uses piercing studs that are *completely* nickel-free. Efforts are now being made by manufacturers to eliminate nickel in costume jewelry, metal jean buttons, zippers, belts, eyeglass frames, and brassiere hooks. Wrist watch bands and straps are also now made of stainless steel, plastic, or other materials.

If there is any question about whether an object contains nickel, a dimethylgloxime test (DMG) can easily be performed. Test kits are available from Allerderm Laboratories, PO Box 931, Mill Valley, CA 94941. Two drops of liquid from each bottle is applied to the metal and the surface blotted with a white tissue. A strawberry red color indicates the presence of nickel.

Treatment

Rashes caused by nickel allergy usually respond rapidly to cortisone creams. Occasionally, cortisone pills or shots may be needed to help clear up more severe skin rashes caused by nickel. Unfortunately, at this time there is no effective way to "desensitize" people to nickel. ❑

* Concept Marketing, Inc., 1000 Arendell St., Morehead City, NC 28557; 1-800/225-2146 (outside North Carolina, 1-800/334-3960). H & A Enterprises, Inc, 143-19 25th Avenue, P.O. Box 489, Whitestone, New York 11357; 1-800/327-3427. Roman Research, Inc., 33 Riverside Drive, Pembroke, MA 02359; 1-800/225-8652.

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Medicine at Wake Forest University, 1941-1991

Robert W. Prichard, M.D.

Fifty years ago this month the two-year medical school of Wake Forest College started its operations in Winston-Salem as the new Bowman Gray School of Medicine. To do so meant striking up an alliance with its fellow Baptist institution, the North Carolina Baptist Hospitals, Inc., which had been on the ground since 1923. Reasonably full accounts of the medical school are in print for those more deeply interested.[1-3] The hospital is not so well documented but a modest amount of history is available.[4] Readers of the *North Carolina Medical Journal* might like some insight into how our state's second-oldest medical school managed to make the trip to Winston-Salem on a shoestring, with not the remotest idea that the 1991 budget of its medical center would total $484,000,000.

From the time medical studies began at Wake Forest College in 1902 the discipline thrived. Along with the medical school at Chapel Hill it survived in the great medical education reform movement started at the turn of the century by the newly revived American Medical Association, manifested in the 1910 Carnegie Foundation "Flexner" Report on Medical Education. While the medical schools at Shaw University in Raleigh and at Davidson in Charlotte closed, Wake Forest and the University of North Carolina went ahead with their programs.

From the Department of Pathology, Bowman Gray School of Medicine, Winston-Salem 27157-1072.

"Fifty years ago this month the two-year medical school of Wake Forest College started its operations in Winston-Salem as the new Bowman Gray School of Medicine."

Both had repeatedly considered adding the clinical years to the two-didactic-year curriculum. In the case of Wake Forest there were discussions at the 1929 Baptist State convention of moving the program to Winston-Salem, but the Great Depression put an end to the matter for the moment. The then-president of Wake Forest was a physician—Dr. Thurman Kitchin—and the issue remained on his agenda and that of his assistant dean, Dr. Coy Carpenter. As Dr. Carpenter often said, a two-year school provided enough misery to make the added burden of the clinical years hardly noticeable. In 1933 the American Medical Association started a program which the nation's ten two-year schools considered a focused effort to close their doors. Dr. Kitchin, a member of a powerful and experienced North Carolina political family, led the successful counterattack on the AMA by the two-year schools. The battle confirmed his belief that Wake Forest should keep trying to add the clinical years.

A 1937 legislative committee appointed by Governor Clyde Hoey favored making the school at Chapel Hill four years, and it became known that a large bequest would be available to do so if the school would relocate in the donor's home town. Objections to moving the UNC program out of Chapel Hill were of such strength that this source of funds was rejected. At that point Wake Forest stepped forward, learning that Winston-Salem was that city, the place it had been considering all along. The money represented funds in the estate of Bowman Gray, late chairman of the board of R.J. Reynolds Tobacco Company. As it turned out, the "large bequest" was about $750,000 (primarily 14,000 shares of Reynolds "B" common stock). Even in 1938 that was not enough to expand to a four-year medical school; the AMA estimated that cost at $10 million. Coy Carpenter later recounted his disappointment when the sum became known, and Dr. Kitchin's asking him if his faith as a Baptist was not strong enough to start the school anyhow; it was, of course. With the help of the Gray family, especially the canny advice of Bowman Gray's brother, James A. Gray, the $750,000 of Reynolds stock was used as collateral for a loan at 1% interest to put up the first medical school building in Winston-Salem (the stock was paying a dividend of roughly 6% at the time!) As of December 31, 1990, the Reynolds stock represented the equivalent of $6,217,791 of the school's endowment. To measure the faith of those who decided to go ahead with the

project it is pertinent to remember that in 1923 Mr. James B. Duke's will provided $4 million for medical education at Duke. In addition the new Duke University School of Medicine got funds from such sources as the Rockefeller Foundation. Dr. Alan Gregg, medical director of the Rockefeller Foundation when Wake Forest received the Bowman Gray funds, was approached to see if the Foundation would help Wake Forest as it had Duke. Dr. Gregg dismissed the Wake Forest supplicants with the advice to use the Bowman Gray bequest to strengthen premedical education at the college—something that Wake Forest couldn't have done if it had wanted to, under the terms of the Bowman Gray bequest.

The North Carolina Baptist Hospitals, Inc., started as part of the post-World War I "75 Million Dollar Campaign" of the Southern Baptist Convention, with a 1919 declaration of intentions at the North Carolina Baptist State Convention. In 1920 Winston-Salem was chosen as the site, five other cities having put in bids (Charlotte, Greensboro, High Point, Raleigh and Salisbury). The famous newspaperman Gerald Johnson, then editor of the *Greensboro Daily News*, accurately predicted that the chosen city would become a great medical center. The 88-bed hospital on Hawthorne Hill was started in 1921, the low bid being $133,690. About 100 beds were finally available when the hospital opened on May 28, 1923. The partnership that would become the present-day medical center began with the 1941 move of the medical school to the city, on land donated by action of the Baptist Hospital trustees.

The two-year school had a solid nucleus of nine faculty members providing basic science education; they moved to Winston-Salem. What was needed were hospital beds and a clinical faculty. The trustees of the Baptist Hospital rose to the occasion, enlarging the plant to 270 beds plus 50 bassinets and approving a seven-page "Memorandum of Understanding" on November 20, 1939, shortened to two pages in 1958! That spirit of cooperation expanded as the years passed and had a lot to do with making the bold move one that worked.

Coy Carpenter and the Development of the Bowman Gray School of Medicine

At this point it would be well to say something about the man whose name is most prominently associated with the development of the new four-year school. Coy C. Carpenter was a son of eastern North Carolina, a Baptist, Wake Forest alumnus and shrewd judge of character as befitted a man whose father ran a country store. Dr. Carpenter was an excellent student who got a scholarship for his last two years of medical school at Syracuse after completing his basic science education at Wake Forest. Finishing at Syracuse, he stayed on in pathology, assisting Dr. Herman Weiskotten, chairman of that department; he also trained in internal medicine. Dr. Weiskotten later played a major role in the AMA's attempt to close the two-year schools, coming into conflict with his protege, whom he had recommended to Wake Forest when it needed someone to teach pathology in 1926. Dr. Carpenter practiced general medicine, taught pathology and provided pathology services in several settings during the years between 1926 and the move to Winston-Salem. In 1935 he had become assistant dean of medicine under a trustee action that specified he was not to be paid for the honor.

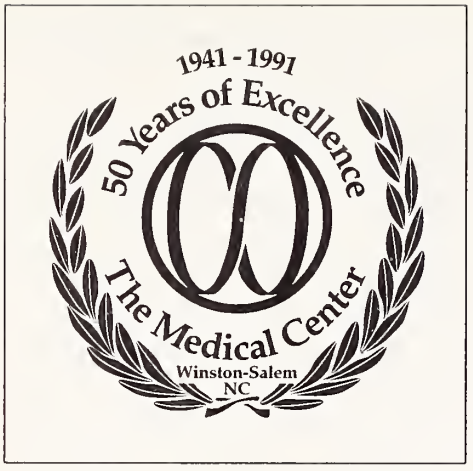
Dr. Carpenter was well aware of the town-gown conflicts that often attended the emergence of a medical school in a community. His first move was a 1939 offer of a faculty position to every member of the Forsyth County Medical Society; 63 were elected to the faculty in 1941 and 28 went on to actually teach. As it turned out, Dr. Carpenter's good intentions fell afoul of human nature, and for some time there was little cooperation between the physicians who used the City Memorial Hospital and those at the Baptist Hospital on the full-time faculty. Although Dr. Carpenter was well aware of the concerns of the indigenous physicians of the city, and regretted the animosity which some directed toward him, he hoped for the best and plunged ahead with development of the medical school. His optimism was legendary. An emeritus faculty member, then a young Raleigh physician who wanted to return to the faculty of his alma mater, asked Dr. Carpenter about how much money was really available to start the four-year program and was told it was "Unlimited." In the mind of Dr. Carpenter that was the only true statement that could be made, and events have proven him right.

In 1942, twelve prominent Winston-Salem practitioners were invited to move their practices to a newly established Private Diagnostic Clinic, modeled after the Duke faculty practice plan. These pioneers were led by Dr. Wingate M. Johnson, a distinguished Wake Forest alumnus who had served as a trustee of



Coy C. Carpenter, M.D.

Wake Forest and had practiced medicine in Winston-Salem since 1910 (see Dr. Felts's article on the following pages). Dr. Johnson was the first editor of the *Journal* you are now reading and a national figure in medicine. A member of a literary family that included the editor of the *Baltimore Sun*, Gerald Johnson, Dr. Johnson wrote for such distinguished publications as the *Atlantic Monthly* in addition to medical journals. The brave twelve who took their established offices into the new venture were all excellent physicians and highly regarded in the community; their contributions cannot be overestimated. They were joined by bright young men from the academic medical community of the day. Tinsley Harrison came from Vanderbilt to head medicine—the medical text he later published is still a standard. George Harrell joined him from Duke and went on to found the medical school at the University of Florida and later still the school at Penn State. Howard Bradshaw, a pioneer thoracic surgeon from Jefferson, chaired surgery, and Frank Lock came from Tulane to head obstetrics and gynecology. Robert Lawson came from Rochester in pediatrics, later chairing the department, then going on to chair the new department at Miami before moving to Northwestern. Another of the young clinicians of the period was Arthur Grollman, whose important work with adrenal physiology was highly regarded.



The war in Europe had started by the time the Bowman Gray funds were in hand, causing great concern about getting the new medical school built in time to begin classes in 1941. That problem, and the small amount of money available, limited what could be done. The original medical school facility in Winston-Salem was a six-story, 70,000-square-foot structure built and equipped for $444,881. It was not enlarged until 1957. This delay in enlarging the plant was at least partially due to a remarkable event. The parent institution, after 122 years in the forests of Wake, followed its medical school to Winston-Salem in 1956, buoyed up on funds which at least in part might have gone to expanding the medical center.

Ground-breaking ceremonies in April, 1940, were followed by construction in July and completion in time for the first classes on September 10, 1941. There were 30 second-year students who had done their first year of medicine in the town of Wake forest and transferred to the new school as sophomores. Forty-three students made up the freshman class of the new school. In only three months the United States would enter World War II, forcing the medical school into suspended animation as far as its plans for faculty additions, building and research went.

There were long-term positive developments based on the imposition of wartime disciplines. The energies and competitiveness of the young academics had to be turned to helping one another through a period of very limited resources, lest the whole enterprise collapse. Grafted onto the long-time hand-to-mouth way of life at Wake Forest, a tradition developed of interdepartmental cooperation which persists today, zealously guarded by the institutional memory of difficult beginnings.

During the 1989-1990 fiscal year, the medical school's academic budget was $145,014,242, of which $48,233,387 came from sponsored programs. Coy Carpenter's optimism, often laughed at and always a subject of comment, has been vindicated. ❑

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The Years After Fifty

The Bowman Gray School of Medicine

John H. Felts, M.D.

Anniversaries remind us of the Roman god Janus, sentinel of the year, who looks backward and forward to connect past and future. Respect for the past provides justification for celebration, and imposes an equally compulsory need to consider the future. Nations today issue commemorative stamps, coins and publications in place of the once obligatory Fourth of July oratory and Memorial Day solemnities. Institutions, like nations, celebrate their anniversaries. The fiftieth anniversary of the four-year program of the Bowman Gray School of Medicine of Wake Forest University occurs this year and must be marked to fulfill historic and administrative necessity.

The past is the realm of the historian, collector of data and compiler of dates, and is a safer exercise than prophecy. But, for those with a predilection for prediction, golden anniversaries are always challenging. There is even a built-in title for relevant writings, "The Years After Fifty." It is particularly appropriate that, during the childhood of this medical school, Dr. Wingate Johnson in 1947 published a short volume so entitled about how to age gracefully.[1] As its title page indicates, he was then a professor of clinical medicine and chief of the Medical School's Private Diagnostic Clinic, as well as an important figure in organized medicine, attested by a foreword supplied by Morris Fishbein, then the all-powerful editor of the *Journal of the American Medical Association*. As most of our readers should know, Dr. Johnson was the founder of the *Journal* you are now reading, which last year celebrated its own fiftieth birthday. He also served as president of the state society and was a thoughtful and respected practitioner of internal medicine, early appreciating the need to be concerned about the problems of those over 50. What do the pages of this short book offer us? They tell us many things, about both the author and his time, and in so doing, allow us to see the past more clearly. Whether directed to persons or applied to institutions, his advice may be taken seriously and profitably.

His witness to his era is a testimonial to the belief that the problems of the living remain the same no matter the time or place, a view supported by quotations from ancients and not-so-ancients which introduce each chapter. This belief is informed by a necessary skepticism, an attitude of benign academic doubt, about human behavior and the possibilities of its perfectibility. One chapter is entitled "Dietary Fads and Fancies," confirming Dr. Johnson's awareness of unchanging human credulity and of our recurring susceptibility to the miraculous. There is also recognition, not only of the durability of conventional wisdom, but also of our obligation to question it, to suspend belief and to adapt to changing times and new knowledge.



Wingate Johnson, M.D.

From the Department of Internal Medicine, Bowman Gray School of Medicine, Wake Forest University, 300 S. Hawthorne, Rd., Winston-Salem 27103.

"It is this concern with the future which links us as physicians with the school of Hippocrates and represents our dowry for our professional descendants."

We are really being provided with an exercise in prognostics for those who read and heed, and who are willing to try to alter what we now call "Life Style." It is this concern with the future which links us as physicians with the school of Hippocrates and represents our dowry for our professional descendants.[2] Certainly comparisons about medicine between the 1940s and now can be easily made and differences better understood by the study of the past. Dr. Johnson's book provides an accurate picture of geriatrics 50 years ago, indicating that he thrived in an era of observation, anecdote, and medical eponym, when each doctor was his own social worker, because he (rarely she) made house calls and learned about life style by using all the senses, not only by questioning and unceasing measurement. His last years, however, were spent on the threshold of molecular medicine, so he would not be surprised by modern medicine. Had he the opportunity to prepare a second edition, he might well point out that the geriatrics he practiced then is no longer a medical orphan, but that preparing and caring for those after 50 may be the greatest medical challenge of Western civilization. And observe that epidemiology has come of age, applying statistical analysis to the house call, that sheer numbers and mobility of peoples have forced this transition, that quality of life is as always the primary concern of both patient and physician.

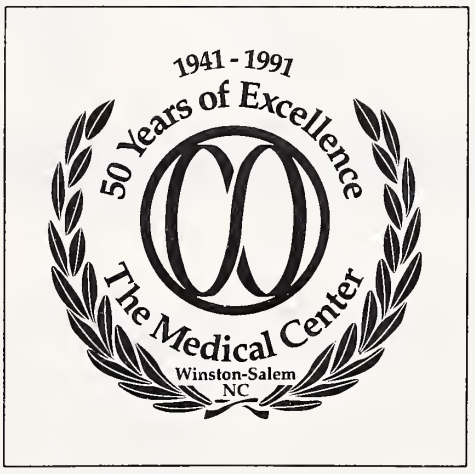
He would certainly be pleased that his medical school and his department of internal medicine have, for its early years after 50, chosen as its primary academic pursuit the care and epidemiological study of patients, and those not yet patients, of similar years.[3,4] But he would have insisted that this quest be animated by sympathy and understanding and remind us that observation and measurement are opposite sides of the same coin. If he were in poetic vein, he might offer the closing lines of John Milton's Il Peneroso, suggesting that we, as physicians,

" ... may sit and rightly spell
of every star that heaven doth shew
And every herb that sips the dew,
Tell old experience do attain
To something like prophetic strain."

❑

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Neither Shall They Learn War Any More

Health Considerations for Desert Storm Veterans

Linda R. Atteberry, M.D.

It is foretold by the prophet Isaiah in the Old Testament: " ... and they shall beat their swords into plowshares, and their spears into pruning hooks: nation shall not lift sword up against nation, neither shall they learn war any more" (Isaiah 2:4). Ever since joining the Army in 1972, I have hoped that each armed conflict would be our last. Three and a half years ago, I switched from Army active duty to reserve status in order to fulfill a lifetime goal: the M.D. degree. In December, 1990, just six months short of the end of that personal rainbow, it was clear to me that the United States would be going to war in the Middle East.

I didn't agonize over what to do. There was only one just alternative: to volunteer to go. To me, it was perfectly logical. The military has a critical shortage of nurse anesthetists, which had been my specialty. Certainly, it wasn't at all logical to some of those around me. Unable to listen to any advice against it, I traded my white medical student's coat for a camouflage uniform, my civilized apartment for a tent in the desert, my bandage scissors for a pistol, and a private bathroom for the wooden three-holer latrine. Assigned as a nurse anesthetist, I went to Operation Desert Shield/Storm with an evacuation hospital from the Puerto Rico National Guard.

From the Bowman Gray School of Medicine, Winston-Salem 27103.

"At least 4,800 Reservists and 2,400 National Guard soldiers from this state were called to active duty to support the war. Many of them have returned to their civilian communities. During the war, they encountered situations and environmental hazards that may affect their health."

An evacuation hospital is a large medical and surgical hospital under tents. The "evacuation" in the name doesn't imply bowel function, but rather the location of the facility near a major airfield. From there, patients are evacuated out of the theater of operations—in this case, to Europe or the States. To our surprise, the patients were almost all Iraqi prisoners of war. During the deployment, I observed firsthand some factors that influenced health and well-being among soldiers. These observations stimulated my interest in health considerations for those who served in the Persian Gulf region and are now returning.

More than 75,000 North Carolinians served in the military in the Middle East during the war in the Gulf. At least 4,800 Reservists and 2,400 National Guard soldiers from this state were called to active duty to support the war.[1] Many of them have returned to their civilian communities. During the war, they encountered situations and environmental hazards that may affect their health. This article describes some of those hazards and reviews some diseases and conditions that could result from exposure to them.

Those returning may have some difficulty integrating themselves into family and employment. The soldier's spouse, and perhaps older children, will have, out of necessity, assumed roles that only the service member performed before being called up. Things valued by the family could seem trivial to someone who has been faced with the possible loss of his or her life.[2] Military chaplains have been active in helping service members realize that changes should be expected, and in giving advice on how to best cope with them. For example, soldiers were encouraged to resist the temptation to park the children at their in-laws' house and whisk the spouse away for a romantic weekend. It was felt that things would go better if everyone in the family could participate in the homecoming and the ensuing days as a family unit. The soldier

will not be able to instantly resume his or her place in the family structure. Some may be frustrated or depressed by this, and counseling may help smooth difficult transitions.

Likewise, many will encounter an altered employment situation. It may be traumatic to some, who realize that their places were actually taken by others during their absence. Some National Guard and Reserve soldiers resigned their jobs when they were called to active duty, and some plan to do so when they return. A surprising number expressed intentions to use the interruption of their jobs by military service as a window of opportunity to enter an entirely different career field on their return.

Although this war was brief, physicians should be aware that soldiers nevertheless are changed, each in his or her personal way, from their former selves, and that the changes in home and career circumstance may be stressful. This awareness will help if veterans present with adjustment difficulties or symptoms of depression.

Combat Stress Reaction and Post-Traumatic Stress Disorder

Combat Stress Reaction (CSR) and post-Traumatic Stress Disorder (PTSD) are psychiatric problems that can result from participation in war. CSR, otherwise known as "shell shock" or "battle fatigue," is acute psychological breakdown during war or during training for war. PTSD is an anxiety disorder characterized by intrusive thoughts about a traumatic event which persist long after the event.

Troops in Operation Desert Storm who were never in direct combat were not exempt from CSR. Those who were distant from enemy forces, as our unit was, nevertheless underwent SCUD missile attacks, heard earth-shaking explosions, and spent many nights in chemical biological protective masks and clothing. The soldiers on the front lines seemed relatively fortunate to me. The SCUDS were not aimed at them, and at least they could relieve some of their anxiety, anger, and frustration by shooting back at those who were shooting at them.

"Military physicians have advised their civilian counterparts that plague, malaria, sandfly fever, and other exotic diseases might need to be considered in ill persons who have been in the Middle East."

Our unit, comprised of hundreds of personnel, lived in a one-room, one-level, below-ground parking garage the first week of the war. Nightly missile attacks wrought havoc. It became a routine: "SCUD launch" announced from loudspeakers mounted on a truck. Then, five to eight minutes to don chemical suits and masks in pitch darkness that was eerily broken by a few blue-lensed flashlights. And then, the blast and shuddering of the earth with the Patriot Missile launch. And, finally, the interception by our missile carrying a ton of TNT, frequently within five miles of our garage home near Dhahran.

Some cases of CSR were seen early in the war. The manifestations include psychological withdrawal, startle reactions, confusion, restlessness, nausea and vomiting, paranoid reactions, and overall reduction of functioning.[3] Both sexes and a variety of military occupational specialties were represented among CSR casualties. One senior officer wouldn't remove his chemical protective overgarment, even for bathing and toileting. A sergeant had to be dressed in her mask and overgarments by comrades during every chemical alert. She seemed to be in a trance, and would have removed them before "all clear" was announced had she not been watched closely. Some of these CSR victims were evacuated out of the combat zone.

CSRs, though sometimes dramatic, seemed rare. My estimate in my own unit is that less than 1% were affected. Israeli studies of battle stress have shown that more than 50% of CSR casualties in one study had PTSD one year after a war. They were much more likely than control subjects, who were also in the war, to have psychiatric impairment on the Military Medical Profile two years later.[3] PTSD is often accompanied by combat nightmares in veterans.[4] Treatment usually includes antidepressant drugs. Nightmares usually disappear with therapeutic antidepressant levels. Persistent nightmares have been successfully treated with cyproheptadine (Periactin).[4]

Medical Health Risks

Although soldiers in the desert complained about the omnipresent and pervasive sand, long-term health risks from sand dust exposure are probably low. Silicosis isn't likely to result from desert living: the spherical particles aren't so likely to incite fibrosis as the jagged particles at quarries and stonecutters' shops. Blowing dust and sand are known to be a vector of Q fever.[5] Health effects of other phenomena, such as oil well fires and open burning waste, remain to be seen. Hazards to soldiers are likely minimized by the short duration of their exposure.

Some recent publications have focused on infectious diseases found in the Persian Gulf Region. "Health Problems in the Persian Gulf," in a recent issue of the *Medical Letter*, lists the endemic diseases and their treatments.[6] Military physicians have advised their civilian counterparts that plague, malaria, sandfly fever, and other exotic diseases might need to be considered in ill persons who have been in the Middle East.[7] Because of immunizations, emphasis on personal protective measures, field sanitation practices, and limited exposure to indig-

enous populations, risks for these diseases are thought to be very low.[7] Preventive medicine teams performed vector surveillance and control via insecticides and rodenticides in operational areas.[8]

"Common things are common" should also probably apply to returning soldiers. Nevertheless, "zebras" are possible in this population. The infectious diseases outlined in the following discussion by no means include every possibility. I have elected to discuss only diseases known to be present in the Middle East that have long incubation or latent periods. Thus, a service member infected during the military operations may be back home before symptoms occur.

Sandfly fever is a debilitating nonfatal flu-like illness that is transmitted by adult female *Phlebotomus* sandflies. Man and gerbils are reservoirs. The agents are phleboviruses of the family *Bunyaviridae*. Acute cases aren't likely to be seen in the community, as the incubation is less than seven days. Acutely, patients have two to four days of malaise and fever of 100° to 105°. To the community physician, the importance of sandfly fever is the long period of fatigue, weakness, and mental depression that follows the acute phase. This may be at least two weeks.[7] No specific diagnostic tests are readily available. Diagnosis is chiefly by clinical history. Initial lymphopenia, followed by neutropenia, is seen in a majority of patients and could be helpful.[5] Treatment is supportive.

The area of military operations in the Persian Gulf region is the classical region of the world for cutaneous **leishmaniasis**, which is also carried by the *Phlebotomus* sandfly. Leishmaniasis is caused by protozoa of the genus *Leishmania*. Intermediate hosts are rats and gerbils. There are four types of leishmaniasis: cutaneous, mucocutaneous, diffuse cutaneous, and visceral.[9] Clinical manifestations vary with the species of *Leishmania*, and the immune status of the host. Incubation is from two weeks to three years.[10] Visceral and diffuse cutaneous leishmaniasis are rare in the Middle East. The cutaneous form, also known as "Baghdad Boil," causes an open sore at least two centimeters in diameter, with lymphocytic infiltration. Diagnosis is by finding organisms on a smear or culture of the lesion. Spontaneous recovery is the rule. In the mucocutaneous form, the primary lesion resolves and metastatic lesions appear. Its destructive nature is due to hypersensitivity to parasite antigens. A direct agglutination test for IgM will be positive, and organisms will be found in biopsies of the lesions. Treatment is with pentavalent antimony compounds.[9]

Eastern Saudi Arabia and Kuwait are generally considered to be **malaria**-free, but Iraq is not. Foreign workers have been known to import malaria, 82% *P. vivax*, and 18% *P. falciparum*, to Kuwait.[11] Malaria in the region is chloroquine-sensitive, and troops deployed to malarious areas were given chloroquine prophylaxis. However, many U.S. troops were encamped with Iraqi prisoners of war, who may have been parasitemic. *P. vivax* may have a long hepatic phase, resulting in a very delayed onset of symptoms. Initially, these are nonspecific and may include malaise, headache, fatigue, and myalgia. Mild normochromic normocytic anemia is usually present, along with a palpable spleen. The hallmark is fever, which rarely follows a classic episodic pattern. The diagnosis should be suspected in a febrile individual who has been to an area where malaria is endemic.[12] Diagnosis is by identification of parasites on thin and thick peripheral blood smears. If the first smear is negative, it should be repeated in a day or two if malaria is still suspected.

Schistosomiasis is another parasitic disease endemic to the Middle East. The intermediate host is a fresh-water snail. The disease is contracted by penetration of bare skin by parasite cercaria in a body of fresh water. Saudi Arabia has no permanent bodies of fresh water, so it should be considered in troops who have been to other countries. The Middle East is home to the species *Schistosoma hematobium*, which has a predilection for the venules of the urinary tract. The cercariae, after entering through the skin, migrate first to the lungs, and then to the portal vein, where males and females form pairs. The pair migrate to the venules of the urinary tract, where they set up housekeeping and lay their eggs. Within two to three months after infection, egg deposition in the ureters and bladder may cause signs and symptoms. These may include dysuria, hematuria, hydronephrosis, and eosinophilia. Hematuria should suggest the diagnosis. Eggs in the urine or biopsied tissue confirm the diagnosis. Praziquantel or metrifonate are effective for treatment.[13]

Q Fever is a rickettsial illness endemic to eastern Saudi Arabia. The agent is Coxiella burnetii, which is transmitted to man from infected animals, such as goats and sheep, via blowing dust. The incubation period is 14 to 26 days. Signs and symptoms include headache, fever, malaise, and weight loss. A dry cough typically appears on the fifth day. There may be homogeneous "ground glass" infiltrate in a portion of a lung lobe on chest x-ray. Convalescence generally progresses gradually over several weeks; however, hepatitis and endocarditis may complicate the course. Tetracycline or chloramphenicol are effective treatment agents.[14]

Epidemics of **brucellosis** had been reported in Iraq just before U.S. troops were sent to the region.[5] Brucellosis was first described by a British Army surgeon on Malta in 1866. He named it "Malta fever." The infectious agent is a small aerobic gram-negative coccobacillus that is nonmotile and non-spore forming. It is a facultative intracellular species that enters via mucus membranes, abraded skin, or inhalation. Incubation lasts one to two months. Transmission is from infected animal to human through direct contact or drinking of contaminated milk. Signs and symptoms are nonspecific. A fever with no real pattern, but highest during afternoons, is typical. Splenomegaly and lymphadenopathy are common physical findings. Diagnosis is suggested by a history of exposure. Definitive diagnosis is via culture or serologic tests. The course can be complicated

by arthritis, epididymitis, endocarditis, anemia, and skin lesions. Recommended therapy is doxycycline plus rifampin,[15] or tetracycline plus streptomycin.[16]

Amebiasis is the diarrheal disease of interest. It may have long asymptomatic periods and persist for years. Amebiasis is infection of the large intestine with *Entameba histolytica*. Transmission is human-to-human via the fecal-oral route. Usually, infectious cysts are passed by carriers, who don't have diarrhea. Signs and symptoms are not specific and include flatulence, abdominal cramping, tenesmus, and sometimes a tender liver. Virulent strains of *E. histolytica* are present in southern Asia.[17] Diagnosis is suggested by red blood cells in the stool, without fecal leukocytes, and is confirmed by finding organisms in the stool or in colonoscopically procured biopsy specimens. Symptomatic amebiasis, for unknown reasons, is most common in adult males. Finding *E. histolytica* in stool does not rule out other causes of symptoms, and workup should also include stool cultures, sigmoidoscopy, and barium enema.[18] Treatment consists of a luminal amebicide plus a tissue amebicide. Amebiasis can be complicated by, or can even present as, a liver abscess, usually in the right posterior hepatic lobe. Ten percent to 20% of these cases will experience direct extension of the abscess into the right pleural cavity. Aspirates look like anchovy paste or chocolate syrup, but seldom contain amebae. Usually, the abscess wall must be biopsied to find them.

That fecal-orally transmitted infections, like amebiasis and hepatitis, are problematic in the Middle East comes as no surprise to those who have studied the toileting practices of some of the natives. They wash only the right hand before meals, and purportedly eat only with the right hand. Guess what the left hand is used for? Iraqis cared for by Army medics reportedly had to be taught how to use toilet tissue.

These infectious diseases discussed here by no means include every single possibility. The focus is intended to be on those that are known to be endemic to the Desert Storm theater of operation, that would likely present after a soldier is back home. Some exotic diseases aren't included, because their short incubation periods would likely cause illness before redeployed troops complete their stateside processing. For example, Congo-Crimean hemorrhagic fever has an incubation period of about four days. That of plague is two to seven days. The military is aware of the Middle East's history of decimating non-native troops with infectious diseases.[5] Battles have been lost in the region in the past due to epidemics, especially diarrhea. The emphasis on preventive medicine in Operations Desert Shield/Storm produced the lowest-ever disease rate in a combat zone, in spite of the environment. Therefore, it is unlikely that many cases of these diseases will occur among veterans. If they do, it is important that lay persons be aware that these exotic diseases are not transmitted from person to person in most cases. Spread of all but amebiasis will not occur here because the vector, intermediate hosts, or both are not found in North Carolina.

Hazardous Souvenirs

In spite of rigorous customs inspections of mail and baggage, it is entirely possible that some of the half-million soldiers coming back to the U.S. will have brought hazardous "souvenirs" back home. These would be most hazardous to children, who are naturally infinitely curious. Such items could include: pyridostigmine, 30 mg tablets, in blister packs of 21 tablets, that were issued to some soldiers for nerve gas prophylaxis; chloroquine tablets for malaria prophylaxis; water purification (iodine) tablets; and spring-loaded autoinjectors of nerve gas antidotes. The drugs available in autoinjectors are: diazepam 10 mg, atropine 2 mg, and pralidoxime 600 mg. Military units required personnel to turn the pyridostigmine and autoinjectors back in, but the possibility that some are in personal baggage cannot be totally excluded. The potential hazards involved are illustrated by a rumor that a soldier used his chemical protective mask as a pillow. An autoinjector of atropine that was stored in the mask carrier case fired into his neck, resulting in death. Whether this particular story is true or not, physicians in the civilian world should be aware that these items could be in their patients' households. Service members who have these items should dispose of them properly, which means return them to a military unit.

The war in the Gulf ended just five weeks after it started, thank God. U.S. wounded were so few that our unit never treated a single one. We performed about 40 surgical procedures on wounded Iraqis, mostly orthopedic cases. It entered my mind that I could be wounded or captured, but I never dreamed that I would be in a position to care for enemy wounded. The Golden Rule certainly applied. The Iraqis who could speak English well enough expressed nothing but gratitude for our care. Almost none of them had wanted to fight in Saddam's Army. They had been dragged from behind the bakery counter or wherever they were working, handed a rifle and uniform, and sent out to face our M-1 tanks.

After several weeks, our remaining patients were transferred to Saudi hospitals, and we packed up to come home. In violation of the law of entropy, packing was a lot harder than unpacking had been. In April, I came back to the States and was discharged from active duty in order to finish medical school. Along with thousands of other North Carolinians who are also coming home, I have reacquainted myself with the flush handle on the toilet and with food that does not come precooked in green plastic bags. We citizen-soldiers of the Guard and Reserve, as in Isaiah, are exchanging rifles and rucksacks for the more peaceful implements of our civilian occupations. We all pray that "... neither shall they learn war any more" will come to pass. ❑

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A New Approach to Military Graduate Medical Education Programs

Dale W. Oller, M.D., F.A.C.S., and Jill Ridky, Ph.D.

During 1986, Assistant Secretary of Defense (Health Affairs) the Honorable William Mayer, M.D., requested the Department of Defense Graduate Medical Education Advisory Committee to review the Military Graduate Medical Education Programs and to suggest improvements in content and quality. The committee was composed of nine eminent health care authorities and chaired by Edward N. Brandt, Jr., M.D., Chancellor of the University of Maryland at Baltimore.

One recommendation made by the committee was for the Department of Defense to use civilian graduate medical education programs at university teaching hospitals in addition to its own military graduate medical education program. The committee believed a merger of civilian and military graduate education would serve to strengthen the program. The committee suggested the Department of Defense explore the possibility of establishing long-term contracts with civilian graduate medical education programs for specified numbers of military physicians in critical specialties such as trauma.

Dr. Oller is Director of the Trauma/Surgery Teaching Services at Wake Medical Center, Raleigh, and Dr. Ridky is Director of Administration, Department of Surgery, The University of North Carolina School of Medicine, Chapel Hill 27599-7050.

"To secure access to the best trauma surgery, the U.S. Navy... decided to look at the top surgery training programs in the country. The Navy's objective was to provide advanced trauma training for its general surgeons..."

To secure access to the best trauma surgery, the United States Navy, based on the committee's recommendations, decided to look at the top surgery training programs in the country. The Navy's objective was to provide advanced trauma training for its general surgeons who were four or more years into their formal residency training program and were already Board Certified. The proposed rotation was for a minimum of three months with the primary emphasis on clinical trauma management, scholarly activities and attendant critical care and burn experience. Unlike other fellowship training, the program would not lead to any type of certification. The program would, however, allow military surgeons to undergo training every four years. Approximately 60 surgeons were projected to participate in the trauma training program. The review was conducted by Captain H.B. Etienne, MC/USN, Director of Surgery at Bethesda Naval Hospital and Advisor to the Surgeon General of the U.S. Navy, and Vice Admiral James A. Zimble, MC/USN.

As a result of the review, the Navy arranged for a site visit on July 6, 1989, at The University of North Carolina at Chapel Hill. Captain Etienne, along with Naval colleagues, met with members of the Department of Surgery. The site visit included interviews with George F. Sheldon, M.D., Professor and Chairman of the Department of Surgery, top level administrators, and Dale W. Oller, M.D., Director of the Trauma/Surgical Teaching Service at the Wake Medical Center.

Chapel Hill was an appealing site, since the University of North Carolina Hospitals system is a Level I Trauma Center and the Wake Medical Center in Raleigh is a Level II Trauma Center. The educational training would also include a clinical and research emphasis at the highly developed AHEC Centers (Area Health Education Centers). The AHEC hospitals in North Carolina and other parts of the country have affiliations with full-time faculty and therefore provide the students and residents experience with diverse patient populations. Providing education for military personnel through

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Richard S. Wibur, M.D., Executive Vice President, Council of Medical Specialty Societies.

the vehicle of the AHEC program was an innovative departure. The AHEC Program at UNC-Chapel Hill is under the direction of Eugene Mayer, M.D.

The University of North Carolina at Chapel Hill is no stranger to military training. Strong working relations existed both at the University of North Carolina Hospitals and on the University campus during World War II. Likewise, Dr. Dale Oller, a retired Captain in the Navy Medical Corps, has had military surgical training and has served on assignments with the Marines and aboard aircraft carriers. Dr. Oller was also Chief of Surgery and Director of the Surgery Residency at Bethesda Naval Hospital.

Based on the evaluations and analysis of various sites, UNC-Chapel Hill was selected as a military training center. A Memorandum of Understanding established the formal contractual nature of the sincere commitment of the Naval Department to offer superb trauma training. The Memorandum addressed location, the time of training, malpractice, living accommodations, and the involvement of the University, the Area Health Education Center and the Wake Medical Center. Contract negotiations were then initiated by Captain Etienne. During a time of marked financial restrictions for the Department of Defense, Vice Admiral Zimble selected the trauma training program as a top priority.

On April 30, 1990, The University of North Carolina School of Medicine, Department of Surgery, launched the University's and the Navy's first collaborative Military/Civilian Trauma Training Program. L. Benjamin Simmons, CDR/MC/USN, a Board Certified United States Navy General Surgeon, became the first fellow to participate in this unique United States Naval Trauma Fellowship.

Commander Simmons, a member of the surgical staff at Charleston, South Carolina Naval Hospital, obtained his surgical training in residency at Oakland Naval Hospital, Served duty in Vietnam, and was Chief of Surgery at the U.S. Naval Hospital, Guam, in the Marianas Islands. Upon completion of the Trauma Fellowship at Chapel Hill and the Wake Medical Center, he will transfer to the surgery staff at the Bethesda Naval Hospital. His responsibilities will include a trauma relationship between the U.S. Navy at Bethesda and the Columbia General Hospital.

In addition to establishing a collaborative program with UNC, the U.S. Naval Department has established programs with the Charity Hospital and Tulane Medical Center under the direction of Norman McSwain, M.D.; the Highland Hospital, Oakland, California, under direction of Claude Organ, M.D.; and the Trauma Hospital of the University of Pennsylvania, under the direction of William Schwab, M.D. ❑

Reference

Department of Defense Graduate Medical Education Advisory.

Simple Observations

Barbara L. Harris Kremer

From the outside, the hospital is just another brick or concrete building with many windows and entrances symmetrically arranged like pieces on a game board and surrounded by endless rows of sections marked "visitor," "resident," "attending," and "handicapped." Except for the "Emergency" entrance or the ominous sirens of an approaching ambulance, it could be any public or governmental office. What sets it apart from a building conducive to a nine-to-five job is the health care environment inside, where trained health care specialists and medical technology work 24 hours a day often fighting the termination of life.

My day as a phlebotomist, otherwise known as the vampire or bloodsucker, begins at 5:00 a.m. two days a week. The novelty of getting up at 4:00 a.m. has quickly worn off and the endless sickness and suffering provokes my recurrent ambivalence toward modern medicine and its limited capabilities. It doesn't seem to matter how much knowledge the doctors have or what preventive measures have been taken, or even how much strength or courage people have to fight back; there are biological mechanisms that are either going to sustain life or end it. These philosophical and ethical thoughts are provoked as I enter the various specialized intensive care units.

From the Department of English, East Carolina University, Greenville 27858.

"It doesn't seem to matter how much knowledge the doctors have... or even how much strength or courage people have to fight back; there are biological mechanisms that are either going to sustain life or end it."

At the Coronary Care Unit, I wait for the doors to automatically swing open with the metallic clank and soft hum of a hydraulic system slowly lifting the bed of a dump truck. As I enter this unit, the familiar sights and sounds of the enveloping public corridors fade away; I no longer hear the revolutions of wheelchairs nor the strides of physicians in their loafers sounding as if alphabet blocks are glued to their heels. The public address system, in full force paging doctors and wandering family members, is not connected to this solemn part of the hospital.

Once inside, I hear the door behind me gently close as the sights, sounds, and smells of this dimly lit environment overtake me. The sterile smells of methyl alcohol and betadine do not erase the odor of body fluids, but do try olfactory senses. Fluorescent lights flicker, giving off just enough luminescence for the doctors and nurses to chart notes on each patient. Some incorrectly calibrated IV pumps erratically chirp like two male crickets fighting over the only female cricket in the county. I slowly walk into the partitioned section enclosing the patient. This private sector will become my work space.

Behind the sliding walls of fabric, I feel as if I have entered the "Starship Enterprise." Surrounding the patient's bed are poles with overturned jugs of medication hanging like hats on a hat rack and sending infusions of medicine into this apparently lifeless body under a white sheet. On another rack hangs a thick plastic bag containing scarlet-red blood which, almost like magic, turns cherry-red as it drips, drop by drop, into the patient's vein. Sinuous tubes and wires extend from every appendage and possible human orifice and lead to various control panels with buttons, switches, and red alarm lights like those in science fiction movies. A transparent, flexible tube, with a regulated oxygen flow, extends down this patient's throat and breathes life into him. It hisses synchronized puffs of oxygen into his lungs while his entire torso expands irregularly with each artificial breath. His chest is covered with sticky circular patches attached to his heart monitor detecting the irregular rhythms of his damaged cardiac muscle. Gradational instruments for blood pressure and oxygen loom over him like overgrown thermometers.

When I entered this fine example of medical technology, my eyes, nose, ears

and hands were awakened. But, as I proceed to work, I become desensitized to the initial sensory stimulations around me.

The patient is oblivious of his surroundings. His eyes are open and fixed on the ceiling but he is unresponsive to any motion I make in front of him. I speak to this man, in vain, and identify him by a number on the bracelet around his wrist, which is swollen due to water retention. His frontal forearm is hot and clammy and marred by the previous puncture marks of needles. His pulse is faint and erratic but I must get the blood sample. I tell him there is going to be a prick but I am sure he is unaware that I am in the room. The only indication of a living presence are the whiffs of designer cologne emitted by a resident fleeting in and out to check this patient's condition. As I hold the patient's wrist and the thumping artery taut, I gently ease the needle into his flesh. My task is almost complete; immediately the candy-apple red tissue pulsates into the syringe in sync with the cardiographs on his heart monitor. I take the needle out, stick the specimen in ice, and hold pressure on the site while wondering if he will ever make it up to the floor or even home.

After holding pressure I leave him and enter his neighbor's sector. On my way out, I pass an elderly lady, probably his wife, who scoots in and stands beside his bed. She picks up his hand and appears to be thinking. Is she wondering when all of this sickness and suffering will be over? Is she remembering their younger days of courting? Is she remembering his marriage proposal to her or the birth of their first child? Is she contemplating who will take care of her if he is unable to? Or is she wondering if he will ever go home?

It seems all too ironic that a place that is supposed to treat and cure illness can be so ominous and depressing. Are health care professionals doing too much or not enough? Is it really worth it, and when do all of our altruistic intentions to preserve life become futile? I ask myself those questions as I watch the same families night after night sleeping on couches in waiting rooms or see grown men, appearing to be the family's strength, break down alone in a remote corner of the hospital.

I am only a small part of this high tech world of modern medicine; I am there to do my job of obtaining blood samples. However, sometimes I really notice the patients: the color of their eyes, the stones in their rings, and the strength of their grip when I hold their hands. But usually, all I notice are their arms. I often misunderstand the meek whispering voices overridden by the beeping, hissing, and thumping machinery. As I work, I can easily ignore the patient's moans and winces of momentary discomfort. My tool, my needle, like other devices, has touched them and entered their body. I remain separated from the patient by my tool and now, by the gloves I must wear. I too have become part of this mechanized system and its intervention. And I often feel guilty for not feeling guilty. ❑

A note from the author

I read with pleasure the article, "My First Patient" by Trina Deal published in the *Journal* in August, 1989 (50:441-2). I also read in the January 1990 issue, "Young People: Write Here, Write Now," written by Dr. William B. Blythe (51:17-8). Both articles motivated me to submit my essay.

I am currently completing my thesis in the Department of English at East Carolina University. As an undergraduate I majored in biology with the intention of entering medical school following graduation. Despite my efforts and endeavors, I was not accepted. Unsure and undecided about what else I wanted to do, I decided to gain more hospital experience and continue my education. Now, as a "humanities" major, my insights have become a bit more introspective. After completing the Master's program I intend to enter a field of medical communications.

Letters to the Editor

Periactin for headaches?
To the Editor:

Periactin is an antiserotonin. Serotonin can be a factor in causing headaches. I have found Periactin to be very effective as a preventive measure for headaches.

Periactin was mentioned in the July 1991 issue of *Monthly Prescribing Reference*. However, nothing was said of this medication being used as a preventive medication for headaches.

Claude A. Frazier, M.D.
Doctors Park, Bldg. 4
Asheville 28801

Comment on Ewing's Sarcoma article
To the Editor:

I am writing to you in regard to "The Names and Faces of Medicine" entitled Ewing's Sarcoma, written by Dr. Roberts in the July 1991 issue (p. 319). This piece, which is a very good review of the origin of the Ewing's sarcoma, has a radiograph associated with it that I think is very atypical for Ewing's sarcoma. The lesion in the distal tibia, which is a very unusual site for Ewing's in the first place, is a relatively well-marginated meta-epiphyseal lesion extending up into the subchondral plate of the tibia. The characteristics of this lesion are much more like that of a giant cell tumor than of a Ewing's sarcoma. The legend also says that the lesion in the piece shows the "characteristic appearance of 'moth eaten' bone destruction." The radiographic appearance of the lesion in the tibia is not moth eaten. In fact, it is more well-marginated than any Ewing's tumor which I have ever seen or is exhibited in Dr. Wilner's classic textbook entitled *Radiology of Bone Tumor and Allied Disorders*. A moth eaten pattern of bone destruction is small, too numerous to count lucencies within the medullary canal scalloping out the cortex with no margination between the lesion and native bone. Furthermore, Ewing`s sarcoma often has a very large soft tissue component and causes a lamellated periosteal reaction in a high percentage of cases.

As a musculoskeletal radiologist, I do not want the readers of the NCMJ to be left with the impression that the tumor exhibited in the article is a typical Ewing's sarcoma or that the pattern of bone destruction in this lesion is that of a moth eaten variety.

Thomas L. Pope, Jr., M.D.
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The Bowman Gray School of Medicine
Winston-Salem 27103

Dr. Robert's response
To the Editor:

The comments from Dr. Pope regarding the atypical radiographic findings for the Ewing's sarcoma case are well appreciated. I stand corrected in my description of this patient's lesion. When I had initially perused the 50 or so records and/or x-rays of patients with pathologically confirmed Ewing's sarcoma evaluated in our department in the last several decades, none of them appeared to be truly "classic." Nevertheless, Dr. Pope's comments do highlight the pitfalls of attempting to make a histologic diagnosis based on radiographic findings.

Kenneth B. Roberts, M.D.
Duke University Medical Center
Radiation Oncology
Durham 27710

In praise of cover artist
To the Editor:

It was my pleasure to receive the July 1991 issue of the *Journal* with another of Bob Pittman's paintings on the front cover. I was fortunate enough to see Mr. Pittman's show at the Maritime Museum in Beaufort several months ago and would hope that you would continue to feature more of this excellent artist's work.

Leon M. Morrison. M.D.
Carteret OB-GYN Associates
16 Medical Park
Morehead City 28557

To the artist:

I am a physician in practice in Charlotte. I am also a member of the North Carolina Medical Society and receive the *North Carolina Medical Journal*. I happened to see your painting, "Fishing Fleet" which was an acrylic I understand. This was the cover of the July issue of the *Journal*. I think it is an excellent painting.

John M. Fedor, M.D.
The Sanger Clinic
1001 Blythe Blvd., Suite 300
Charlotte 28203

The heart of medicine
To the Editor:

The most heart-warming, reassuring experience the practice of medicine has brought my way: that of hearing patients say, "Doctor, we can talk to you—you will listen; that makes me feel better." How sad it is that too often the heart and soul of medicine is being sacrificed to money and scientific productivity—that medicine is rapidly becoming more a business than an art and a science; that the doctor is too busy to listen. Perhaps the greatest tool available to the physician is the ear if he chooses to use it.

John H. Fitzgerald, M.D.
626 Clark Drive
Lincolnton 28092

Treatment of anaphylaxis

To the Editor:

The vast majority of allergies are not life-threatening, but those who do react with systemic symptoms to insect venom, some foods (peanuts, shellfish) and some drugs (aspirin) are in hazard. If medical aid is not quickly available, such anaphylactic reactions can be swiftly fatal, often within half an hour of initial symptoms, sometimes within ten to fifteen minutes, more rarely within three to five. The tragedy is that some hundred lives are lost annually to such reactions for want of a very small amount of subcutaneous injectable epinephrine 1:1000 (0.3 to 0.5 cc for adults, no more than 0.3 cc for children). Many of these individuals are young to middle-aged adults who are otherwise in excellent health. Many have not been able to reach medical aid in time to stave off potentially fatal respiratory distress and cardiovascular involvement, including plummeting blood pressure. Epinephrine is the immediate drug of choice in anaphylaxis and can buy the time necessary to transport an allergic patient to the nearest physician or hospital emergency room.

It is for this reason that I have long advocated a program to train lay persons in positions of responsibility of public safety (such as school teachers, forest rangers, nurses, EMTs) to recognize symptoms of a severe systemic reaction and to administer premeasured injectable epinephrine as an emergency measure when a physician is not immediately available. The Executive Committee of the American Academy of Allergy has endorsed such a program, and the American Medical Association has provided a model law for state legislatures to institute such programs among the various states.

I appeared before the Food and Drug Administration and the National Institutes of Health and spoke to the American Medical Association Board of Trustees. After 10 years as a "Lone Crusader," (*AMA News*) the model bill was prepared. Each state must pass this legislation. Approximately 15 states have enacted the law. It has been a long, lonely struggle.

In November at their annual meeting in San Francisco, the Committee on Insect Allergy of the American Academy of Allergy and Immunology discussed the program at some length. There was general agreement that any patient who has suffered a systemic reaction and is considered to be at risk of anaphylaxis should be prescribed premeasured epinephrine and be instructed in its administration. The committee urged family physicians and emergency room personnel to be aware of the potential risk to such patients and the importance of epinephrine as the drug of choice to combat anaphylaxis.

The committee found no difficulty with supporting the administration of injectable premeasured epinephrine by trained non-physicians in cases where the patients themselves already possessed prescribed epinephrine. There was more difficulty, however, when it came to training non-physicians to recognize symptoms of anaphylaxis and to administer epinephrine to a patient who had not been diagnosed as severely allergic prior to the emergency situation. A decision on this last subject was not reached, but the Committee did set up an ad hoc committee to address the problem of anaphylaxis and to study how this program of training and certification of lay persons is working in those states that have already embraced the program.

In reference to the education of medical professionals in the proper treatment of anaphylaxis, the Committee discussed the possibility of providing articles for Emergency Medical Technicians' journals and professional literature as well as undertaking educational measures for pharmacists and nurses to stress the importance of epinephrine as the drug of choice and as part of follow-up management for patients at risk of future severe reactions.

The committee also discussed the possibility of surveying Emergency Room treatment for anaphylaxis, including how many patients are seen, the results of treatment and the manner in which further preventive management is handled. It was agreed that such a survey presented logistical problems.

Claude A. Frazier, M.D.
Doctors Park, Bldg. 4
Asheville 28801

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To the Editor:

After reading Dr. Hallock's editorial in the North Carolina Medical Journal (1991;52:331-2), I am moved to share with you the following allegory written by Alieta Eck, M.D.

C. Franklin Church, M.D.
Raleigh Family Physicians, Inc.
1109 Dresser Court
Raleigh 27609

Need Gas? Just Send the Bill to Blue Car and Blue Truck

Everyone knows that all gas station owners are filthy rich (we're not sure how rich, but definitely too rich) and all senior citizens are very poor. Thus, I am surprised that our compassionate congressmen have not come up with a Social Gasoline Security Act yet. All senior citizens deserve unlimited mobility and, regardless of how wealthy they might be, should not have to pay a fair market price. The government ought to foot the bill. Having had considerable experience in a similar program, I would like to outline how Mandatory Gas-O-Care Assignment would go.

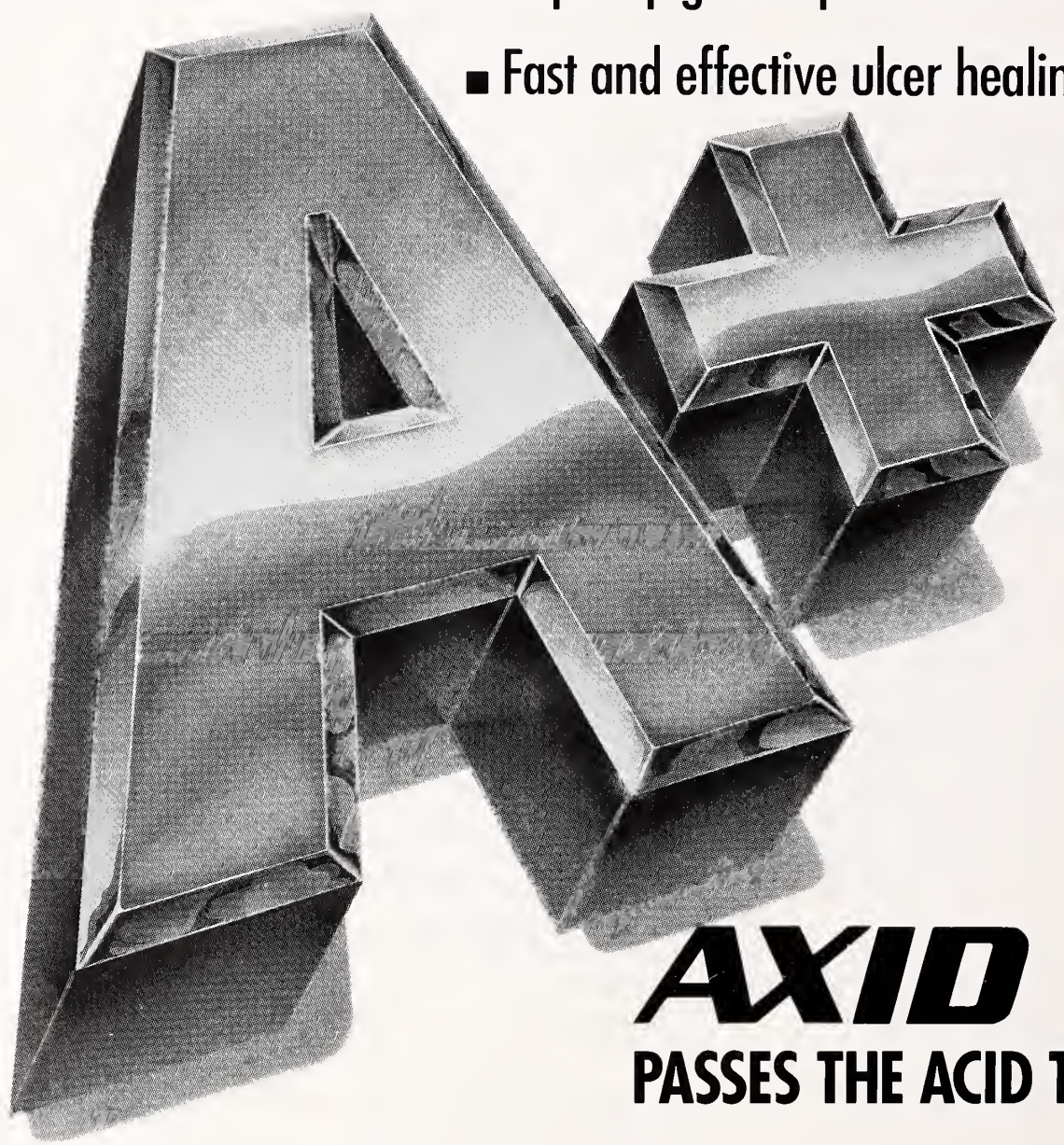
A gray-haired motorist would drive up to the gas station. Twenty dollars worth of gasoline would be pumped into his car but the attendant would then simply smile, tip his hat, and accept no payment at this time. As of September 1, 1990, because our legislators see senior citizens as not only poor but also inept at paperwork, the wealthy gas station owner would then have to fill out a lengthy form and submit it to Blue Car and Blue Truck of Pennsylvania. He would not be able to charge the senior for this paperwork service. After all, he's got all the bucks. Never mind that his employees need to be paid right away, his rent and utilities cannot wait, and his suppliers demand payment when the gasoline is delivered

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Carcinogenesis, Mutagenesis, Impairment of Fertility—A 2-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a 2-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a 2-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in 1 fetus, and at 50 mg/kg, it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in 1 fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers—Studies in lactating women have shown that 0.1% of an oral dose is secreted in human milk in proportion to plasma concentrations. Because of growth depression in pups reared by treated lactating rats, a decision should be made whether to discontinue nursing or the drug, taking into account the importance of the drug to the mother.

Pediatric Use—Safety and effectiveness in children have not been established.

Use in Elderly Patients—Healing rates in elderly patients were similar to those in younger age groups as were the rates of adverse events and laboratory test abnormalities. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of varying durations included almost 5,000 patients. Among the more common adverse events in domestic placebo-controlled trials of over 1,900 nizatidine patients and over 1,300 on placebo, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common with nizatidine. It was not possible to determine whether a variety of less common events were due to the drug.

Hepatic—Hepatocellular injury (elevated liver enzyme tests or alkaline phosphatase) possibly or probably related to nizatidine occurred in some patients. In some cases, there was marked elevation (>500 IU/L) in SGOT or SGPT and, in a single instance, SGPT was >2,000 IU/L. The incidence of elevated liver enzymes overall and elevations of up to 3 times the upper limit of normal, however, did not significantly differ from that in placebo patients. All abnormalities were reversible after discontinuation of Axid. Since market introduction, hepatitis and jaundice have been reported. Rare cases of cholestatic or mixed hepatocellular and cholestatic injury with jaundice have been reported with reversal of the abnormalities after discontinuation of Axid.

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in 2 individuals administered Axid and in 3 untreated subjects.

CNS—Rare cases of reversible mental confusion have been reported.

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to nizatidine. Impotence and decreased libido were reported with equal frequency by patients on nizatidine and those on placebo. Gynecomastia has been reported rarely.

Hematologic—Fatal thrombocytopenia was reported in a patient treated with nizatidine and another H_2-receptor antagonist. This patient had previously experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity—As with other H_2-receptor antagonists, rare cases of anaphylaxis following nizatidine administration have been reported. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine have been reported.

Overdosage: Overdoses of Axid have been reported rarely. If overdosage occurs, activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis does not substantially increase clearance of nizatidine due to its large volume of distribution.

PV 2091 AMP
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References
1. Data on file, Lilly Research Laboratories.
2. *Scand J Gastroenterol.* 1987;22(suppl 136):61-70.
3. *Scand J Gastroenterol.* 1987;22(suppl 136):47-55.
4. *Am J Gastroenterol.* 1989;84:769-774.

NZ-2943-B-149347

Additional information available to the profession on request.

Lilly **Eli Lilly and Company**
Indianapolis, Indiana
46285

to the station. He is rich, and he can wait. After four to five weeks or so, he would receive a check from Blue Car and Blue Truck with the following explanation of benefits:

You have charged $20.00 for this senior's gasoline. But we in the government bureaucracy have approved only $12.00 for this service. We thus would issue you a check for 80% or $9.60. You may now bill your patron for the copayment of 20% or $2.40. But, we are sorry to say that the government finances are in a bit of a mess, and the Gramm-Rudman Deficit Reduction Act compels us to reduce our check to you by 2.92%. You are not allowed to bill the customer for this extra $0.28. If you do, we will fine you $2,000 if we find out. Here is your check for $9.32.

Now many seniors would think this is a great deal. They get $20 worth of gasoline for just $2.40. But I am afraid that the gas station owners might feel a bit cheated. They might try a few survival techniques. They might allow only a small number of seniors to pump gas at their stations, or they might choose to specialize in only young drivers. Very few would go into time-consuming specialty training to learn to care for the elderly car owner's special needs. And those who did would never be able to own their own gas stations.

Many gas-station owners would move out of New Jersey. Many would retire early to avoid this aggravation. And, finally, the brightest young people would no longer vie to get into gas-station school. The fact that gas-station owners need eight to 12 years of expensive training (up 400% in the past 10 years); the fact that they need to be available 24 yours a day; the fact that they must purchase costly malpractice insurance because there is a lawyer behind every bush waiting for an attendant to spill some gasoline—all these facts are ignored when the government sets its "approved" rates.

Our legislators feel that all senior citizens—even Bob Hope and Ronald Reagan—deserve a break. No senior should be discriminated against. I am sure that all caring, altruistic gas station owners worth their salt will gladly accept this unprecedented government intrusion into the gas-station industry.

But there might be some self-centered diehards. So we might have to get a bit tough. We could make their gas-station licenses depend on not discriminating against seniors. We could make it illegal to try to sell their stations and leave the state. We could hand-pick the best and brightest young people and compel some of them to enter gas-station school.

If we run out of ideas on how to make this plan work, we could send a delegation to the Soviet Union for inspiration and training. After all, they've had 73 years experience with this sort of thing.

New Members

Buncombe

Joseph Roger Brown, Jr. (AN), 445 Biltmore Ave.,#105, Asheville 28801

Michael Steven Heller (IM), 80 Victoria Rd., Asheville 28801

Robert Earl Wiggins, Jr. (OPH), 495 Biltmore Ave. Asheville 28801

Cabarrus

Brian Thomas Moore (GS), 48 Ardsley Ave., NE, Concord 28025

Cumberland

Barbara Lynn Appel (PD), 3415-C Melrose, Fayetteville 28304

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Stuart Aaron Green (RESIDENT), Box 31049, DUMC, Durham 27710

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Alexander Vance Murray (FP), 510 N. Elam Ave., Ste. 102, Greensboro 27403

Robert Alexander Reade (FP), 510 N. Elam Ave., Ste. 102, Greensboro 27403

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Mecklenburg

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Anant Bir Singh (EM), 2012 Joelene Dr., Rocky Mount 27803

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Pitt

Jonathan Michael Cox (CD), ECU School of Medicine, Section of Cardiology, Greenville 27858

Robert Dennis Steed (PD), ECU School of Medicine, Dept. of Pediatrics, Greenville 27858

Robeson

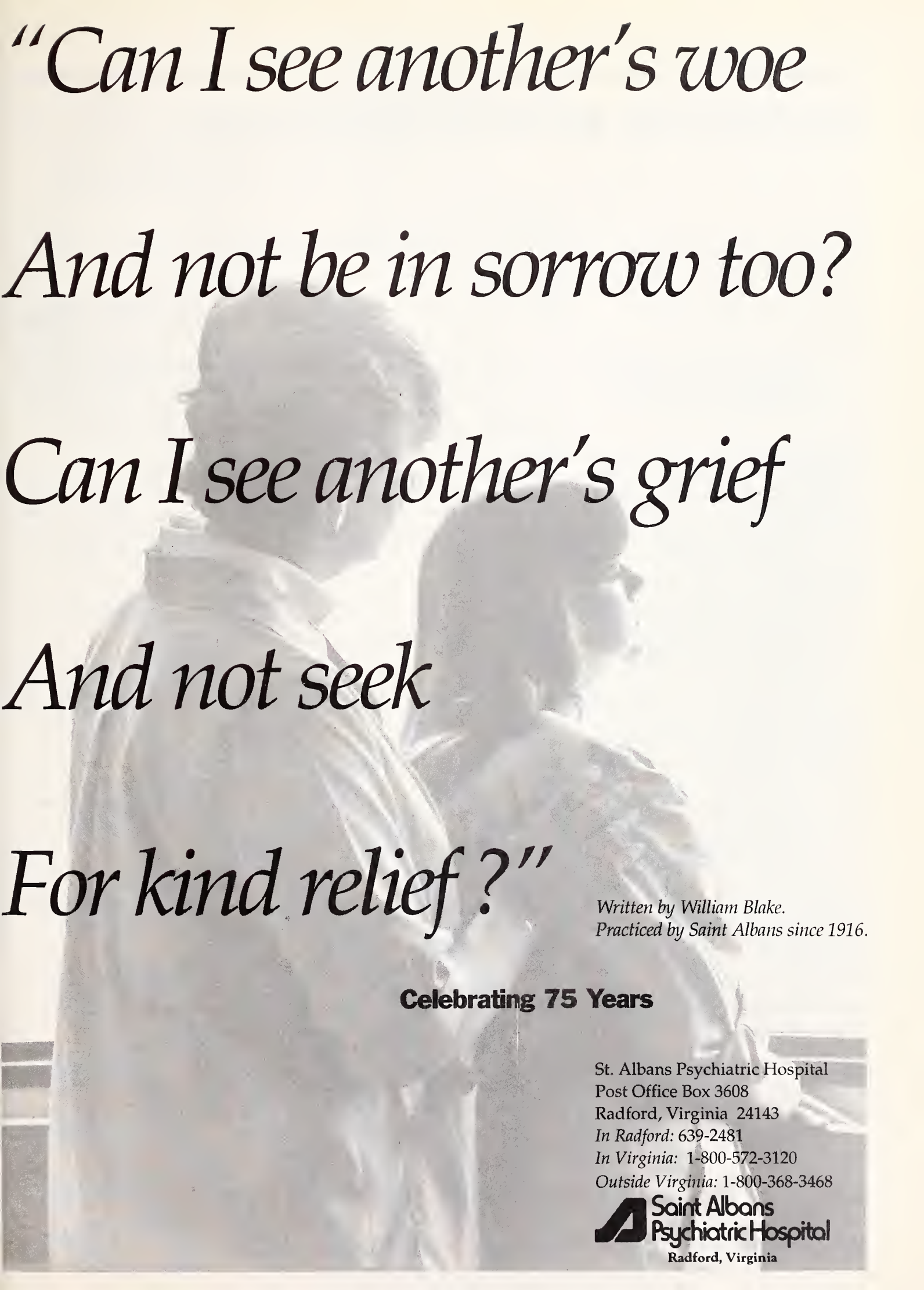
Charles Willy Stewart-Carballo (OBG), 4903 Pinedale Blvd., Lumberton 28358

Wake

David Alfred Horowitz (PD), 8824 Campfire Trail, Raleigh 27615

Wayne

Laurence Davis Frederick, III (ORS), 2701 Medical Office Place, Goldsboro 27530


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Continuing Medical Education

September 11
Increased Physician Accountability: A Legalistic Overkill?
Place: Greenville
Credit: 7 hours Category I AMA
Fee: $150
Info: Mary C. Valand, Office of Continuing Medical Education, Box 7224, Greenville 27835-7224. 919/551-5200:

September 11
The Changing Role of Medical vs Surgical Management in the 1990s
Place: Fayetteville
Credit: 7 hours Category I AMA, AAFB Accreditation Pending
Fee: $30.00
Info: Charles Ellenbogen, M.D., Director, Internal Medicine, FAHEC, 1601 Owen Drive, Fayetteville 28304. 919/678-7213

September 13
Clinical Advances in the Diagnosis and Treatment of Thrombotic Diseases
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

September 13-14
Practice Management Conference/Opportunities Fair
Place: Research Triangle Park
Credit: TBA
Fee: Resident Physicians $45; Family Physicians $125; Office Managers $85
Info: Marietta Ellis, NC Academy of Family Physicians, P.O. Box 18469, Raleigh 27619. 919/781-6467

September 13-15
Fourth National Conference on Nicotine Dependence
Place: Raleigh
Credit: 16 hours Category I AMA
Info: American Society of Addiction Medicine, 5225 Wisconsin Ave., NW, Ste 409, Washington, D.C. 20015. 202/244-8948

September 16 - Winston-Salem
September 23 - Greensboro
Risk Management: In Practice
Credit: 2 hours Category I, AMA
Info: Dianne Reinoso, Loss Prevention Manager, Medical Mutual Insurance Co., of NC. 1-800/662-7917

September 20
What's New in Surgery and Ambulatory Care?
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

September 20-21
Chemical Pathology in the 21st Century: The Challenge of Data Creation, Management and Diagnosis
Place: Atlantic Beach
Credit: 9 hours Category I, AMA
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

September 23-27
11th Annual Symposium on Chlorinated Dioxins and Related Compounds
Place: Research Triangle Park
Info: Sharon Wills, Program Assistant, Office of Continuing Education, UNC School of Public Health, CB #8165, Miller Hall, Chapel Hill 27599-8165. 919/966-4032

October 2-4
International Symposium on Acute Renal Failure
Place: Chapel Hill
Credit: 14 hours, Category I, AMA
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

October 3-5
Practical Geriatrics
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

October 11
Laboratory Aspects of Organ Transplantation
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

October 18
Symposium on Cost-Effective Management of Coronary Artery Disease
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

November 15
Prostate Cancer: Screening and Treatment Controversies
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

November 16-17
George Ham Symposium
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

Continuing throughout the year
Geriatric Education Modules in geriatric medicine, mental health, health promotion and long-term care
Place: Durham
Fee: $10
Info: Geriatric Education Center, Box 3003, DUMC, Durham 27710. 919/684-5149

News Notes

From the State Department of Environment, Health, and Natural Resources, Division of Epidemiology

Rabies in Northeastern North Carolina

Rabies, long absent in most of North Carolina, has been diagnosed in four raccoons and a fox in the northeastern part of the State during the last two months. The last case of rabies in an animal other than a bat in this area was 21 years ago in a horse. While the two raccoons that tested positive for rabies did not bite any people, the fox bit a child in Pasquotank County. Treatment is underway for the child.

According to Dr. Lee Hunter of the Veterinary Public Health Program, State Department of Environment, Health and Natural Resources, it is probably an extension of a rabies outbreak that is ongoing in Virginia. Vaccination of all dogs and cats is mandatory under state law and is designed to protect primarily the people who come in contact with them. Rabies vaccine is a safe and effective way to protect your pet and especially yourself against rabies.

Animal control departments also play a very important part in protecting public health. Stray animals are removed from the community and cannot bite people and potentially spread disease. Additionally, animal control officers assist in investigating animal bites for health authorities.

Rabid animals spread rabies by biting people and other animals. The bite injects the virus into the body and can result in disease. Therefore, it is important to avoid bites by animals. People who see an animal acting abnormally or having difficulty walking should avoid the animal, especially foxes or raccoons that appear friendly. An Animal Control officer should be called. They are trained to properly handle such situations.

If you are bitten by an animal, whether it is acting strangely or not, you should wash the wound thoroughly with soap and water. Then you should seek medical attention as soon as possible. Proper treatment is available from your physician.

Physicians treating persons who have been bitten by an animal should consider the need for post-exposure rabies prophylaxis in addition to standard wound treatment. Assistance in determining the need for post-exposure prophylaxis can be found in a booklet titled "Management of Animal Bites," which is available free of charge from the Environmental Epidemiology Section. The telephone number is listed below. Telephone consultations are also available from your local health department or the people listed below; they can also help in obtaining rabies vaccine.

Lee Hunter, D.V.M., M.P.H.
Environmental Epidemiology Section
919/733-3410; home

John Freeman, D.V.M., M.P.H.
Environmental Epidemiology Section
919/733-3410

J. N. MacCormack, M.D., M.P.H.
Director, Division of Epidemiology
919/733-3421

From The Governor's Institute on Alcohol and Substance Abuse

The Governor's Institute on Alcohol and Substance Abuse is a newly organized effort in North Carolina to address alcohol and substance abuse treatment and prevention needs of the adult, adolescent and youth populations of this state. The Governor's Institute was incorporated recently as a non-profit organization and is supported by federal, state and private funding. Its goal is to create new learning opportunities for health sciences students and primary care providers, translate research findings into practical application, and provide technical and referral information about chemical dependency to physicians and other health care providers.

The Institute's chairman is Michael F. Durfee, M.D., M.P.H., medical director of Wake Teen Medical Services in Raleigh and professor of pediatrics in the school of medicine at the University of North Carolina at Chapel Hill. Executive director is David Warren, J.D., professor of community and family medicine at Duke University Medical Center. Medical education director is James Finch, M.D., who is medical director of Durham County Substance Abuse Services.

For more information, contact the Governor's Institute on Alcohol and Substance Abuse, Inc., Box 13374, Research Triangle Park, NC 27709, (919)541-7009.



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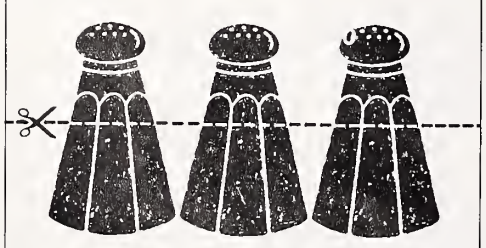
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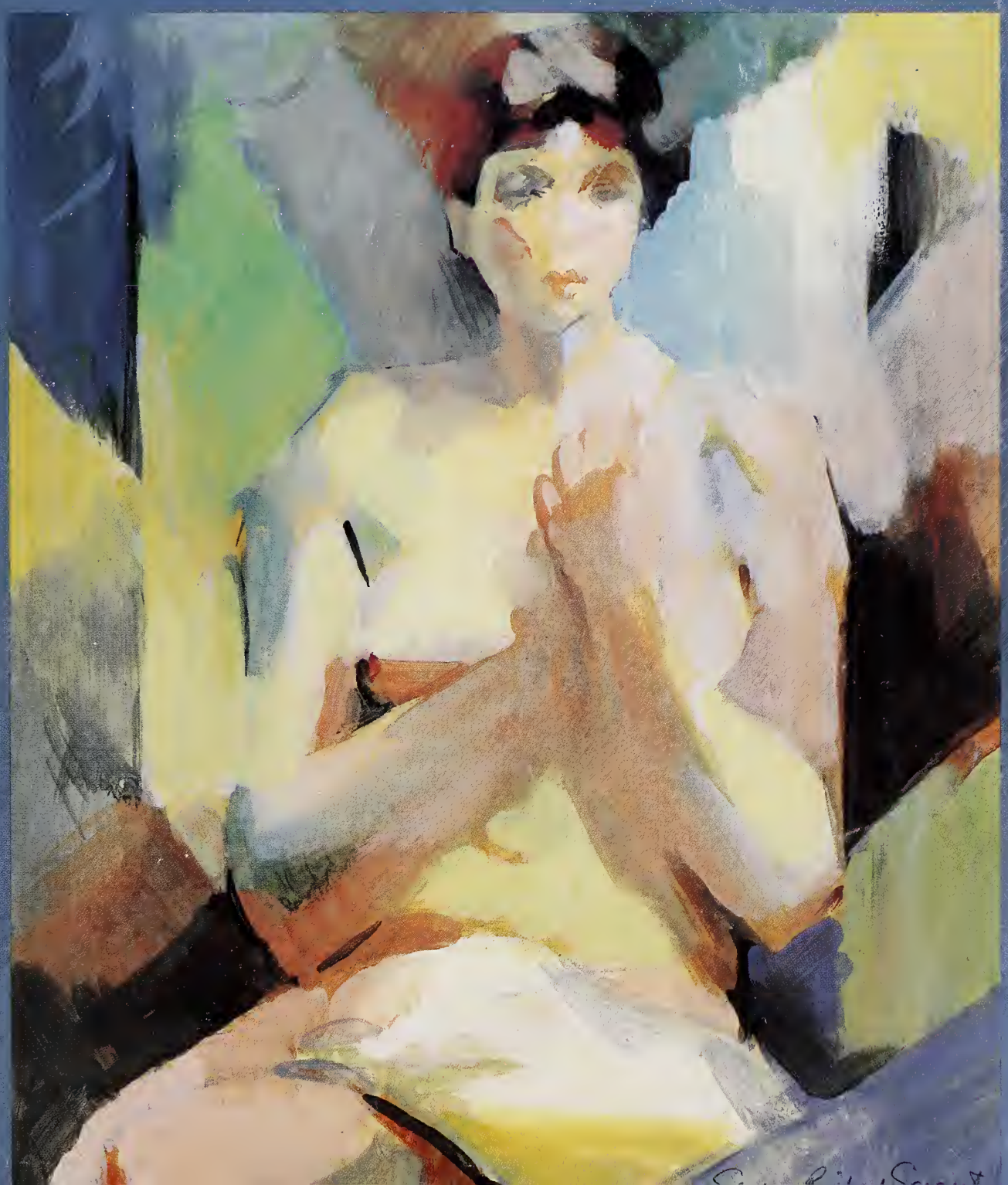
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October 1991
Volume 52
Number 10

North Carolina Medical Journal

For Doctors and their Patients

Special Issue: Women's Health

Margaret L. Bertrand, M.D., Guest Editor



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North Carolina Medical Journal

FOR DOCTORS AND THEIR PATIENTS

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On the cover: "Portrait of Eleanor" is the work of a prominent California artist, Geneve Rixford Sargeant (1868-1957). Along with her painting and years of travel to study art, she has lived a well-balanced life as a wife and mother, an art teacher and a friend to artists. Although "Portrait of Eleanor" was painted in 1930, it seems to speak clearly to women of today. We chose this selection because it appears to depict a woman surrounded by whirling choices and issues, many of which will be discussed in this edition of the *North Carolina Medical Journal*. "Portrait of Eleanor" is part of the Holladay Collection. A copy of the painting was donated to the *Journal* for this cover by the National Museum of Women in the Arts, 1250 New York Ave., NW, Washington, D.C. 20005-3920.

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Health Concerns of Female Patients: Politics or Apathy?

Margaret Bertrand, M.D., Guest Editor

You can see it happening. There is a sharpening focus of national attention shining on women's health care concerns, time and again over the past year. This new awareness has taken center stage, playing out against a backdrop of global unrest: during the same period of time mideast tensions exploded into a gulf war. A trade war developed between the U.S. and Japan. Economic sanctions were imposed against various countries, and the Soviet Union's communist regime was toppled.

Meanwhile, the U.S. government's level of involvement with women's health issues is evolving. A most noticeable change has been the appointment of Dr. Antonia Novello as the United States Surgeon General. There is also now an established congressional caucus for women's issues. It is co-chaired by Representative Olympia Snowe (R-ME) and Patricia Schroeder (D-CO). Often found in the thick of the political fray is Dr. Henry Waxman (D-CA). Dr. Waxman chairs the House Subcommittee of Health and the Environment.

A few events worth noting: in August, 1990, the National Institutes of Health issued a revision of its policy statement on the inclusion of women in research projects. The following month, the NIH Office of Research on Women's Health was established and Dr. Ruth Kirchstein was named acting director. The goal of Dr. Kirchstein and her staff is to improve the prevention, diagnosis and treatment of illness in women and to enhance research related to diseases and conditions that affect women.

> "It's a fact that even though women are the primary consumers of medical care, there has been a relative paucity of dollars spent on medical research, diagnosis and treatment of illnesses that primarily afflict women."

The first woman ever to head the NIH, Dr. Bernadine Healy, was appointed Director in March, 1991. Dr. Healy has declared her intention to put emphasis on women in research... both as investigators and as subjects. As an indication of her intent, during her confirmation hearing Dr. Healy remarked, "women's health research has been neglected in many areas and at times, outright disregarded."

To me it seems as if we've been spirited aboard the starship Enterprise, and we are "boldly going where women's health issues have never gone before."

Surely you've noticed all the attention the various forms of media have devoted to this topic over the past two years. One of the toughest topics to leap into the national spotlight has been the gender bias in research, diagnosis and treatment of numerous medical disorders.

It's a fact that even though women are the primary consumers of medical care, there has been a relative paucity of dollars spent on medical research, diagnosis and treatment of illnesses that primarily afflict women.

All of this has led, in some cases, to strained relations between doctors and their patients. Perhaps it should be noted that most of us have come to realize physician compassion is not gender-related... and not automatic. It is an area of communication that needs to be evaluated frequently.

Physician-patient communication may not be the only area that requires fine-tuning. Many of you may not be aware that the American Medical Association this year launched the start of a new public health campaign entitled, appropriately, "The Women's Health Campaign." It was organized to provide physicians and the public with current, well-researched health information. The subject of women's health was selected after staff within the AMA learned of research showing women to be the primary caretakers of the family and therefore of vital importance to family health.

From Bertrand Diagnostic Imaging and Breast Center, Greensboro 27401.

It's because of the clearly demonstrated need at both the political and patient care levels that the *North Carolina Medical Journal* decided to devote an entire edition exclusively to women's health.

This unique approach would not have been possible without the help of some talented individuals. I would personally like to thank and congratulate all of the contributors to this issue. The nine dedicated articles cover the gamut.

Four of these articles are related directly or indirectly to breast cancer and early detection. For instance, background regarding recently passed legislation requiring state-regulated insurers to cover screening mammograms and Pap smears is presented... problems faced while trying to reach the medically underserved women in our state with life-saving breast cancer screening programs is discussed, and the difficulty in detecting breast cancer and other related conditions after augmentation is addressed.

Another article talks about teen pregnancy. It's a topic of critical importance to everyone in North Carolina. Our state has one of the highest infant mortality rates in the country and it is well known that statistically, the number of these deaths is more than double in unplanned pregnancies as compared to those that are planned. Also, non-surgical fallopian tube recanalization is extremely important, as infertility affects one in 15 couples. The diagnosis and treatment of this problem results in many medical dollars being spent.

The article on upper extremity disorders is very appropriate, with the increasing number of women seen in the work force of North Carolina.

Special attention should be given to the article entitled "Political Constraints on Contraceptive Development in the United States." I believe this piece clearly outlines many of the problems that need to be addressed on a large scale relating to women's health research.

Choosing topics and recruiting authors proved to be a nearly overwhelming task. The list of diseases, disorders and conditions of concern to female patients seemed to grow longer the more I became involved in this project.

"We are already so far behind that it will take considerable time, energy and effort to reach our goals of providing all women with the quality of health care they deserve—both in one-on-one interaction with physicians and in the kinds of drugs and treatments that are prescribed."

One obvious omission from our topic list kills more women across the board than anything else mentioned: cardiovascular disease. Also, we hope that future articles will cover lung cancer—the number one cancer killer of women. And something to consider: this year AIDS will become the number one killer of women of childbearing age.

There should also be some time and space devoted to the many diverse psychological issues affecting women, including domestic violence—the leading cause of injuries to women in the United States. In fact, domestic violence requires more medical treatment than rape, motor vehicle crashes and muggings combined. Add to all these: depression, obesity, panic attacks, eating disorders... well, as you can see, the list goes on and on.

Some women's health advocates, from politicians to research scientists, suggest that the answer lies in the feminization of the medical profession. That would include encouragement of women physicians to assume leadership roles in teaching and research, and more active involvement in the practice and politics of medicine. My belief is that this is only a partial solution.

Assuming the current trend continues... even by the year 2000, women still will not be equally represented in general medical practice, nor in the political, educational and research arenas. My response is that it is not the gender of the practitioner nor of the researcher that matters. It is instead the personal level of awareness, concern and dedication that determines the outcome of quality care facing women in our society.

In summary, although this past year has seen political and legislative strides made on behalf of women, there is much to do. We are already so far behind that it will take considerable time, energy and effort to reach our goals of providing all women with the quality of health care they deserve—both in one-on-one interaction with physicians and in the kinds of drugs and treatments that are prescribed.

We can no longer be apathetic about this. By the sheer volume of information available to them, female consumers of health care are more confused, inquisitive, worried and assertive about diagnosis and treatment than ever before. It is up to us, the physicians of North Carolina, to be informed, sensitive gate-keepers worthy of their trust and their care. ❑

Acknowledgment

I would like to express my appreciation for the assistance of Leslie Mackler, librarian at Moses Cone Hospital. She has always gone the extra yard to provide me with hard-to-find research on patients and health topics alike.



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About the Guest Editor



Photo of Dr. Bertrand courtesy John Page, *Greensboro News & Record.*

We are delighted that Dr. Margaret L. Bertrand has agreed to be special editor of this month's issue of the *North Carolina Medical Journal.*

Dr. Bertrand received a Bachelor of Arts from Cornell University and attended Medical School at Baylor College of Medicine in Houston, Texas. She completed a diagnostic radiology residency at Duke University Medical Center where she served from 1986 to 1987 as a part-time member of the faculty.

Dr. Bertrand is the owner-director of an outpatient imaging center in Greensboro, Bertrand Diagnostic Imaging and Breast Center, which specializes in diagnosing conditions and diseases that relate to women's health.

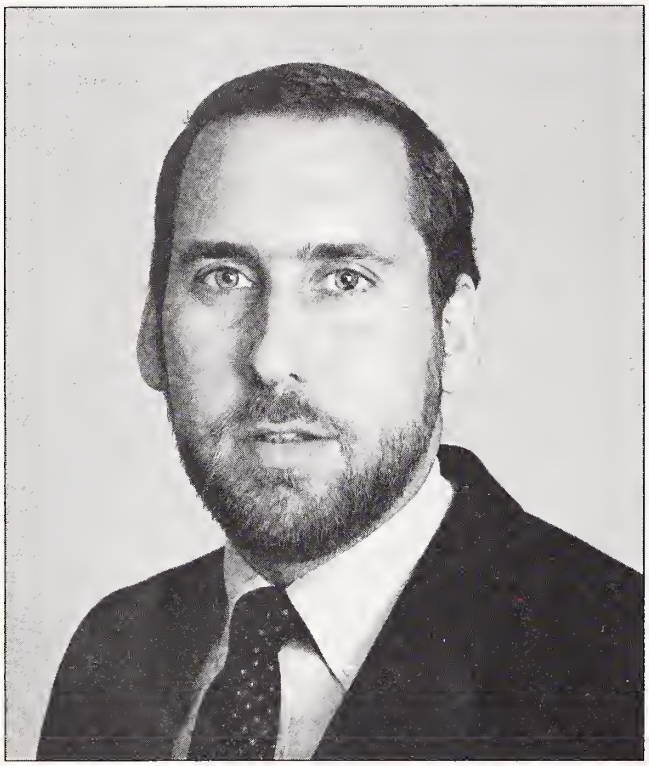
She has served on the Board of Directors of the North Carolina and Greensboro Units of the American Cancer Society. She has also been active in the Cancer Society Speakers Bureau and Professional Education Committee.

Dr. Bertrand is a member of the American College of Radiology, the Radiologic Society of North America, the American Association of Women in Radiology, and the American Women's Medical Association.

Margaret Bertrand is the mother of two teenage boys, Winn and Patrick. We have been pleased to work with her on this special issue and are grateful to acknowledge her contribution to the *Journal.*

—Edward C. Halperin, M.D.
Associate Editor

About Associate Editor Dr. Edward C. Halperin



One year ago Dr. Edward C. Halperin, an Associate Editor of the *North Carolina Medical Journal*, recommended to the editorial board that a special issue be devoted to women's health issues. Dr. Halperin specifically suggested that the issue be largely written by women physicians and address both medical, social, and political issues concerning the health of women. The editorial board approved the concept. Dr. Halperin recommended Dr. Bertrand as guest editor of this special issue and has worked closely with Dr. Bertrand in the selection of articles, editing, and final completion of this special issue.

Dr. Halperin received his Bachelor's Degree from the Wharton School of the University of Pennsylvania. He received his medical degree from the Yale University School of Medicine. He served as an intern in internal medicine at Stanford University Medical Center and was Resident and Chief Resident in Radiation Medicine at the Massachusetts General Hospital. In 1983 he joined the Department of Radiation Oncology at Duke University Medical Center as Assistant Professor and was subsequently promoted to Associate Professor. Readers of the *Journal* are familiar with his name from his frequent contributions to our book review column as well as articles on social and political issues.

Dr. Halperin's clinical interests revolve around the treatment of cancer. He is the principal author of the textbook *Pediatric Radiation Oncology*. In the laboratory, he has collaborated for many years with Dr. Ralph R. Bollinger of the Department of Surgery at Duke, investigating the uses of innovative immunosuppressive techniques in solid organ transplantation between mammalian species. Dr. Halperin has also conducted research investigating innovative therapeutic techniques for human gliomas utilizing a murein model.

Dr. Halperin was the recipient, during his residency, of the American Society for Therapeutic Radiology and Oncology Residents Award for outstanding research. As a junior faculty member at Duke he was named the recipient of the American Cancer Society Clinical Oncology Career Development Award. He is a member of Alpha Omega, Sigma XI, the American Society for Therapeutic Radiology and Oncology, and the Radiation Research Society.

Dr. Halperin and his wife Sharon reside in Chapel Hill with their three children: Rebecca, age 8, Jennifer, age 6, and Alison, age 3.

—Eugene A. Stead, Jr., M.D., Editor



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Political Constraints on Contraceptive Development in the United States

Jason B. Smith, M.P.H., D. Malcolm Potts, M.D., BChir, and Judith A. Fortney, Ph.D.

Why Develop New Contraceptives?

Each year about six million American women become pregnant. More than half of these become pregnant unintentionally.[1] The proportion of all pregnancies that are unintended in the United States, 51%, is higher than that of our nearest neighbor, Canada (39%), higher than that of the United Kingdom (32%) and three times that of the Netherlands (17%).[2] During the course of their lifetimes an estimated 46% of women in the U.S. experience at least one unintended pregnancy. Almost half of these unintended pregnancies end in abortion, and mathematical models show the lifetime risk of abortion for a woman in the U.S. to be between 45% and 70% percent.[1] Many women seeking abortion are young; 26% are under 20 years of age and 81% are under 30. Most are white (69%) and single (82%). Almost half (49%) report that they were not using a contraceptive during the month they conceived.[3]

From Family Health International, P.O. Box 13950, Research Triangle Park 27709.

Even those who use reversible methods of contraception must face a risk of contraceptive failure that varies considerably by method, from about 5% per year for the pill to 30% per year for spermicides. These contraceptive failure rates reflect both the technical limits of each method and the degree to which each method is properly used.[4] In addition, even small yearly rates can accumulate and result in high long-term failure rates. For example, a contraceptive that has a relatively low annual failure rate of about 5%, such as the pill or the intrauterine device (IUD), can have a 10-year failure rate of between 25% and 50%; i.e., as many as half of the users of these methods may become pregnant during this interval.[5]

In the U.S. particularly, contraceptive methods are more expensive than in other industrialized nations. Pills sell at up to 60 times the price charged for the same formulation in some other countries. Norplant and IUDs, the most reliable methods of reversible contraception, cost several hundred dollars and are inaccessible to many women, especially teenagers and the poor who may be in greatest need.

Some methods simply aren't even available in this country. Women in Mexico have access to a greater range of contraceptives (e.g., injectables and a range of IUDs) than American women. Chinese peasants had the choice of low-dose oral contraceptives years before they were available here.

The most straightforward benefits of contraception are the reduction of unintended pregnancies and thus of the need for subsequent abortions. Other non-contraceptive benefits of contraception include the prevention of sexually transmitted diseases afforded by barrier methods and reduction in the risk of certain cancers afforded by oral contraceptives.

Moreover, access to contraception enhances the ability of young women to continue in school and of older women to work outside the home, affording them greater measures of intellectual and economic autonomy. Despite the benefits, many women who do not desire to become pregnant do not use contraceptives or use them sporadically. Even those who conscientiously use reversible methods of contraception remain exposed to risks of unintended pregnancy. Still others, unwilling to risk an unintended pregnancy and unable to find an acceptable reversible method, resort, perhaps prematurely, to the permanency of sterilization as a solution to their dilemma. This exposure has become increasingly relevant in the current age of AIDS and other epidemic sexually transmitted diseases where methods that are protective against infection are less effective at preventing pregnancy.[6]

The population of the United States is a diverse one in terms of ages, races, cultures, tolerances, preferences, values and aspirations. It makes intuitive good sense that only a wide diversity of contraceptive options would be able to meet the range of needs posed by our citizenry. In a nation which offers literally hundreds of easily available, affordable options for relatively trivial products such as sneakers and radios, it is odd that there are so few choices available in the contraceptive marketplace. Why is this and can anything be done about it?

"In a nation which offers literally hundreds of easily available, affordable options for relatively trivial products such as sneakers and radios, it is odd that there are so few choices available in the contraceptive marketplace."

Why Aren't New Contraceptives Being Developed?

Historically, large pharmaceutical companies have been the only organizations with the resources necessary to engage in comprehensive programs of contraceptive research and development. However, since 1970, all but one (Ortho Pharmaceuticals, Inc.) of the nine U.S. pharmaceutical firms previously involved in the development of new contraceptives have withdrawn from this activity.[7] This exodus has been driven by bottom-line considerations of profitability and risk.

First, the development of new chemical entities or devices, such as contraceptives, is an enormously expensive, long, complex and uncertain undertaking. In general, only one out of every 10,000 new chemicals synthesized in a laboratory are submitted to the Food and Drug Administration (FDA) for approval.[7] On average, it takes 12 years and over $200 million to successfully develop a drug, test it and receive FDA marketing approval.[8] U.S. patents only last for 17 years, so the possibility of recovering any investment may be compromised.[9] Harper, et al. found that of 20 potential contraceptive agents identified between 1963 and 1976, only two eventually received FDA approvals.[10] The development process for Norplant, one of the few new contraceptives approved by the FDA since the synthetic hormones and modern IUD designs of the 1960s, was begun in the mid-1960s. The first pharmacologic studies were begun in the U.S. in 1975, human clinical trials began in the U.S. in 1980 and the method was finally approved by the FDA in late 1990.

The necessary large and front-loaded investments make major drug companies reluctant to develop new contraceptives for small (under $50 million in annual sales) markets. Currently only oral contraceptives and condoms have sales figures of sufficient magnitude.[7]

The second significant obstacle to new contraceptive development is the fact that liability is difficult to assess and even more difficult to control. There are two sub-types of liability that figure prominently in the equation of contraceptive development. The first sub-type to come to most people's minds is product liability, i.e., the degree to which a manufacturer can be held responsible for damages that are determined by a court to be caused by the use of that manufacturer's products. There are a variety of opinions about the impact of product liability on private industry's participation in contraceptive development. The National Academy of Sciences Committee on Contraceptive Development held that "...recent products liability litigation and the impact of that litigation on the cost and availability of liability insurance have contributed significantly to the climate of disincentives for the development of contraceptive products."[7] Some consumer advocates argue that, with the exception of the Dalkon Shield cases, there has been no increase in litigation in recent years and that the insurance crisis is across-the-board rather than contraceptive or even pharmaceutical industry specific. Their position is that product liability has improved product safety.[11] Some in the pharmaceutical industry argue that although few cases actually go to court, many claims are settled out of court. Companies must bear the legal costs associated with the threat of litigation and also for the cases they win. Further, there are instances of substantial damages being awarded and upheld on appeal where the suits were based on information contrary to scientific evidence and, specifically, contrary to FDA findings.[12] Other industry commentators argue that the real impact of product liability litigation is felt through decreased sales due to bad publicity.[13] For example, it could be argued that the combination of unassessable liability, low profitability of a product that needs to be purchased only once every three to five years and decreasing sales due to unfavorable public attitudes caused Searle to discontinue sales of the Cu-7 IUD, even though they have won all suits brought against them.

The second sub-type of liability, i.e., the degree to which companies are perceived in the public's opinion to be somehow at fault, irresponsible or even simply engaged in unacceptable or morally objectionable activity, may be even more troublesome to the development of new contraceptives than the results of specific court cases. This perception on the part of a scientifically naive and morally ambivalent public plays a critical role in determining the character and outcomes of judicial processes regarding product liability. It is also an important factor in decisions about contraceptive development that are made by legislators, administrators and regulators, who are all, in the final analysis, accountable to the public. Public perception, accurate or otherwise, can have profound and capricious effects on sales of not only the product in question but also other products and services offered by the same manufacturer or even sales of similar products by other manu-

facturers. This situation has been aggravated in recent years by the efforts of a vocal conservative minority who fear (not without some justification) that increased contraceptive research may also result in the development of new abortifacients. Unlike specific product liability litigation, the effects of a generalized public perception of liability occur in a context where there is no formal mechanism of arbitration from which a manufacturer can seek protection or redress. Clearly, fear of uninformed and volatile public opinion can affect decisions made in the boardrooms of the nation's industries.

The abandonment of contraceptive research and development by the large drug firms has led to a *de facto* increase in reliance on an already overburdened and underfunded public sector, to undertake or subsidize work formerly done by the drug companies either directly through government agencies or indirectly through universities and private non-profit organizations.[7,14] In view of the health benefits of contraception and the nearly universal need for artificial means of fertility control, a strong case can be made for increased public sector support for contraceptive development. The public sector has traditionally excelled in performing and subsidizing basic reproductive research, thus generating innovative ideas for development. It has also been a crucial element in supporting educational and training efforts that insure a stable and sufficient supply of professional expertise. The work in contraceptive development conducted by the National Institutes of Health, the U.S. Agency for International Development and the World Health Organization represents new ventures. The challenges for the future lie in devising ways to rationalize the respective roles of the public and private sectors in order to guarantee adequate funding over long development periods and to capitalize new industry without undercutting competitive traditions.

Finally, the hostile environment to contraceptive development means that fewer talented people decide to consider contraceptive research as a career option. Inadequate and unstable funding means smaller paychecks, less opportunity to work on projects of scientific interest and, because of the long development times involved, even the possibility that a significant portion of one's life's work might be lost to the vagaries of fluctuating budgets and competing priorities.[7] This "brain drain" away from contraceptive research has already depleted the pool of competent professionals available to work on such projects as currently exist.

"In view of the health benefits of contraception and the nearly universal need for artificial means of fertility control, a strong case can be made for increased public sector support for contraceptive development."

What Are the Alternatives?

As one might expect, suggestions for improving the situation vary according to perceptions of causes. There is a fair consensus, at least across groups favorable to the development of new and better contraceptives, that the current level of investment in contraceptive research and development is not sufficient to produce innovative products with improved safety and efficacy over the course of even moderate time frames. This is at least partly because of increasing costs of sophisticated technology required for developing fundamentally different approaches. There is also a reasonable consensus that, since it would be impossible and/or inappropriate for the public sector to provide all the capital necessary for contraceptive development at a reasonable pace, ways need to be found to bring private capital back into this area of investment.

A variety of legal and administrative measures have been suggested to provide incentives and protections to stimulate private industry and restore the balance of roles between the public and private sectors. These include:

- adjusting patent laws to cover the extended research and development (R&D) timeframe required for contraceptive development,
- streamlining regulatory processes so as to be less burdensome,
- adjusting liability and insurance laws to protect manufacturers from unlimited product liability, and
- increasing public sector support of basic research and manpower training.

All of these solutions have been applied in some part in analogous circumstances (development of AIDS therapies, orphan drugs, or vaccines) with varying degrees of success.[8,17-21] Recent laws and administrative rules have allowed greater flexibility about patent extensions. Some of the more onerous aspects of the FDA regulatory process have been recently addressed and reform is under active discussion. Even though there have been some problems with existing statutes, provision of tax credits and a seven-year exclusive marketing period under the Orphan Drug Act have resulted in a marked increase in the development of these drugs. Between enactment in 1983 and mid-1990, 375 chemical entities received orphan designation compared with only ten between 1973 and 1983. Although contraceptives are unlikely to qualify under existing orphan drug regulations, it is reasonable to assume that similar incentives for manufacturers would accelerate development of new methods. Experience with liability control under the National Childhood Vaccine Injury Compensation Act of 1986 has been positive, if not perfect, and this legislation has served to stabilize the supply and cost of essential immunization products. Recent efforts to increase public support for basic reproductive research include efforts to authorize and fund fertility and

infertility research centers under the auspices of the National Institute for Child Health and Human Development.

Taken singly, none of these measures would be expected to have an overwhelming impact. Even taken together they may be insufficient to bring U.S. companies back into the field. Again, there is a consensus that legislative and administrative measures should be enacted with the object of creating a more favorable climate for investment, although some would argue that a substantial demonstrated increase in the potential market for contraceptive products would be necessary to reattract the large drug concerns.

It should be possible to increase the potential market for contraceptives. The contraceptive prevalence among married women of reproductive age in the U.S. is 66%. The comparable proportion in Canada is 73%, in the United Kingdom 83%, in Sweden 78% and in the Netherlands 72%.[16] Among young, unmarried women, the rates are typically much lower.[2]

Why Isn't More Being Done?

In the first place, the notion of risk is poorly understood. It is especially misunderstood by the general public for a variety of reasons including lack of education about mathematical probability, exposure to an overload of risk information via the media, distorted and sensationalized portrayals of the same, and psychological predispositions to misinterpret risk information depending on how the messages are framed.[22-25]

This basic lack of ability to accurately assess risks expresses itself in a variety of ways pertinent to the contraceptive development process. Representatives of the general public, whether elected or appointed, may or may not understand risk well. Regardless of their personal familiarity with risks and benefits, they are constrained in most cases from enacting laws and regulations that are unacceptable to the majority of people they represent. In the regulatory arena, the difference between therapy and contraception is derived from the notion of providing a sick person with a potential benefit as opposed to providing a healthy person with a possible risk. This framework for assessment doesn't allow the potential benefits of contraception adequate representation in the balance of considerations. Orphan drugs are often exempted from normal procedures and granted special incentives because of their potential to benefit an identifiable group of people at risk. Women who wish to "contracept", or even certain sub-groups of women with special contraceptive needs such as teens, or women over 40, or lactating women, are not considered as being identifiable groups at risk. Vaccines are afforded special treatment because we fear the consequences of their withdrawal from the market, usually death of our children, even though they are known to present unavoidable risks to some of the people mandated to receive them. In the judicial system, lack of ability to accurately assess risk (and its neighbor, cause) can manifest itself in jury decisions that ignore or contradict scientific fact, good faith effort and the reasonable limits of technology. In the stores, consumers who think nothing of driving a car, flying in an airplane or hurling themselves off the sides of mountains on skis, are often afraid to buy contraceptives that carry considerably less risk than any of the those activities.

"In the regulatory arena, the difference between therapy and contraception is derived from the notion of providing a sick person with a potential benefit as opposed to providing a healthy person with a possible risk. This framework for assessment doesn't allow the potential benefits of contraception adequate representation..."

The other reason there is such little progress in contraceptive development in the United States is because "...contraception is inherently suspect because of its actual or perceived effect on sexual mores."[9]

As a group, Americans are, and always have been, morally conservative and ambivalent about things sexual. This is evident in the agonizing national debate over abortion and in the schizophrenia of public dismay over the high teenage pregnancy rates on one hand, and the refusal to make contraception easily available to adolescents on the other. It should come as no surprise to an observer of the American scene that the same society which expects and is capable of producing more and better choices for consumers in the contraceptive marketplace would be simultaneously reluctant to resolve the problems that would lead to greater contraceptive development.

Without some kind of consensus of public opinion, it is unlikely that the necessary adjustments to the current laws and regulations will be made by people who represent the general public. It is also unlikely that consumers will make major shifts in their buying practices without changes in perception and attitude. Consumer demand for more choices will likely produce marginal improvements of existing methods, but probably little in the way of truly new contraceptive choice.

What Can Doctors Do?

Members of the medical community are trusted dispensers of information and relief, as well as often the arbiters between the public and the political systems concerning matters of health. Correspond-

ingly, their patients and their communities at large are best served when physicians augment their technical medical expertise in contraception with current information on the psychosocial and political aspects of this area.

Doctors are in a unique position to alleviate fears and assist in a balanced assessment of the individual risks and benefits of those who seek their help, in this regard as in any other. Contraception (or non-contraception) exposes women to a highly complex and variable set of risks and benefits over a significant portion of their lifecycles. Consequently, their contraceptive choices may have serious current and long-term effects on their health and well-being. In addition to the counseling and education services doctors provide in their own practices, physicians should be aware of community resources which may be of help to their patients in making contraceptive decisions. Of particular importance in the counseling process is taking the time to listen to and address the patients' perceived needs. It has been demonstrated that psychological rather than physiological concerns are often paramount in the process of contraceptive decision-making and that proper contraceptive counseling can have favorable effects on acceptance, compliance and continuation.[26-28] Proper counseling may also, in a less direct sense, help to dispel some of the unjustified suspicion surrounding the use of contraceptives among the public at large.

As holders of special expertise with respect to health, doctors have a special responsibility to contribute their knowledge and inform the public debate both as individuals and through professional associations. Of the many areas that benefit from the direct involvement of organized medicine, one area at the federal level where doctors have indisputable legitimacy is in policy regarding biomedical research. It would be hard to overestimate the importance of the support of organized medicine in the efforts to achieve adequate and stable funding for basic reproductive research, without which contraceptive development is unlikely to take place. ❑

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Official Call
House of Delegates

House of Delegates
Meetings Scheduled

Notice to: Delegates, Alternate Delegates, Officials of the North Carolina Medical Society, and Presidents and Secretaries of component medical societies.

Sessions of the House of Delegates will convene in the Grand Ballroom, of the Grove Park Inn, Asheville, North Carolina, at the following times:

Thursday, November 7, 1991 - 8:30am - Opening Session
Saturday, November 9, 1991 - 10:30am - Second Session

A member of the Credentials Committee will be present at the Meeting Registration Desk in the Grand Ballroom Lobby, Wednesday, November 6, 1991, 3:00pm to 5:00pm, and Thursday, November 7, 1991, 8:00am to 9:00am to certify Delegates. Delegates must bring their Credential Cards for presentation at the Registration Desk. Delegates Badges must be worn to be seated in the House of Delegates.

Reference Committee Hearings

Reference Committee hearings are scheduled to begin Thursday, November 7, 1991, at 2:00pm.

Edwin W. Monroe, MD, President
John T. Dees, MD, President-Elect
John A. Fagg, MD, Speaker
Alfred L. Ferguson, MD, Vice-Speaker
Carolyn R. Ferree, MD, Secretary-Treasurer
George E. Moore, Executive Vice-President



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Nonsurgical Fallopian Tube Recanalization for Treatment of Infertility

Ronald J. Zagoria, M.D., Sally W. Regan, M.D., and Raymond B. Dyer, M.D.

Obstruction of the proximal segment of the fallopian tube, the interstitial portion, is the cause of infertility in up to 20% of infertile women.[1] Since this segment of the fallopian tube is inaccessible to laparoscopy, the only treatment alternatives available until recently have been laparotomy with microsurgical tubal repair or in vitro fertilization. These procedures entail considerable cost and morbidity and result in pregnancy rates of 30% to 50%,[2,3] and 10% to 15%,[4] respectively.

The numerous etiologies for fallopian tube obstruction include infection and trauma, but obstruction of the interstitial portion of the tube is most commonly the result of a plug consisting of amorphous debris.[5] In the majority of cases, these plugs can be dislodged and flushed from the fallopian tubes using a new transvaginal recanalization procedure which incorporates catheters and guidewires traditionally used for arteriographic procedures. The promising new technique for clearing tubal obstructions has been performed in several hundred patients.[6,7] The procedure is safe, relatively inexpensive, and performed on an outpatient basis.

From the Department of Radiology, Bowman Gray School of Medicine, Wake Forest University, Winston-Salem 27103.

With experience, physicians can expect successful tubal recanalization with this nonsurgical technique in approximately 90% of patients. The pregnancy rate after this fluoroscopically guided procedure is comparable to that following microsurgical tubal repair.[6]

The Procedure

Transvaginal fallopian tube recanalization (TFTR) is attempted only after proximal tubal obstruction has been demonstrated by standard hysterosalpingography (figure 1). The procedure is performed during the follicular phase of the patient's menstrual cycle. Before tubal recanalization is attempted, prophylactic oral antibiotics are administered beginning two days before the planned procedure. During TFTR, the patient receives analgesics and relaxants intravenously as needed and vital signs are monitored. With the patient on a fluoroscopy table, the cervix is cleansed and then cannulated by means of a coaxial angiographic catheter and guidewire system (figure 2). Once persistent fallopian tube occlusion is confirmed, a catheter is advanced to the ostium of the occluded tube. The catheter is wedged into the ostium and radiographic contrast material is again injected. In some cases, this selective injection clears the tubal obstruction and results in opacification of the tubal lumen. If obstruction persists, a smaller catheter containing a thin, flexible guidewire is advanced into the fallopian tube for an attempt at recanalization (figures 3,4). In most cases the guidewire can be manipulated beyond the site of occlusion, and the small catheter advanced over it. The result is a bougie type of dilatation of the interstitial fallopian tube. Contrast material can then be injected to assess the remainder of the tube (figure 5).

Results and Follow-up

The entire procedure routinely requires less than one hour and often can be completed in less than 20 minutes. Patients may resume normal activities on the day following the procedure. To date, no complications other than those seen with routine hysterosalpingography have resulted from this technique. The radiation dose to the ovaries is minimal, and during the follicular phase of the menstrual cycle radiation should not pose a risk of fetal malformation.

The rate of successful fallopian tube recanalization with TFTR has been 94% in the first 18 patients undergoing this procedure at our institution. Seven of our patients have had follow-up hysterosal-

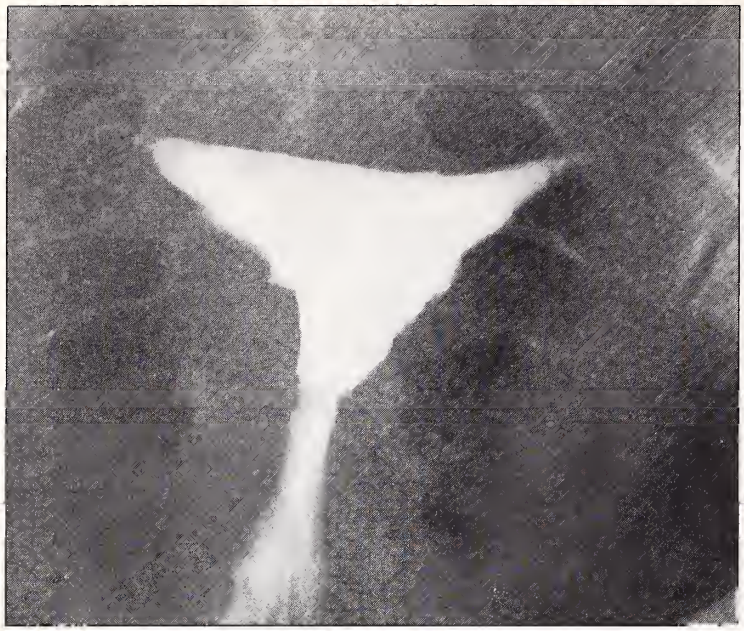


Figure 1. Hysterosalpingography demonstrates bilateral interstitial fallopian tube occlusion.

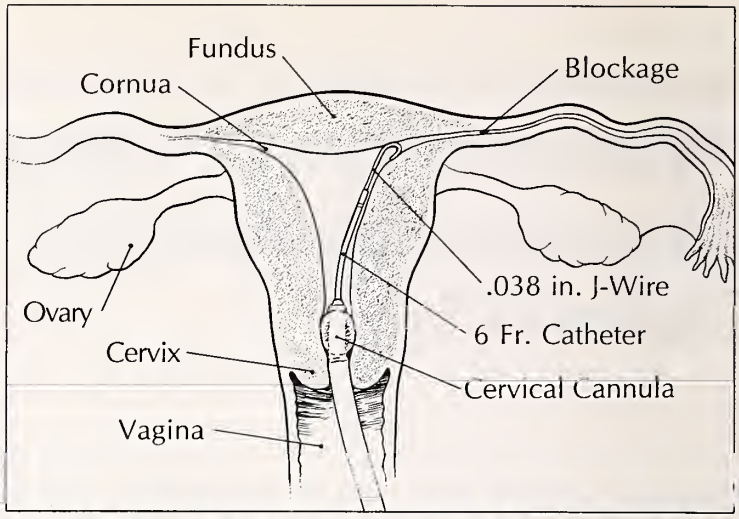


Figure 2. Diagram depicting placement of 6 Fr catheter in the ostium of the occluded fallopian tube.

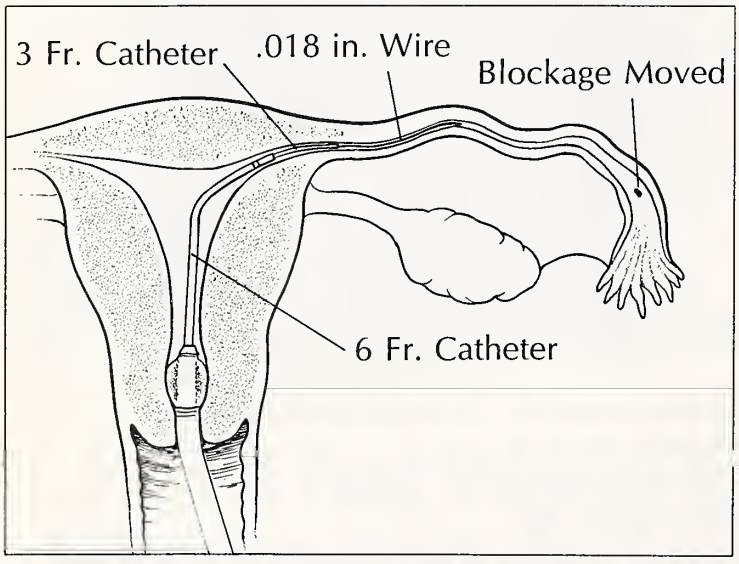


Figure 3. Diagram depicting coaxial recanalization of the fallopian tube as the 3 Fr catheter and .018 inch guidewire are passed through the 6 Fr catheter and advanced beyond the occlusion.

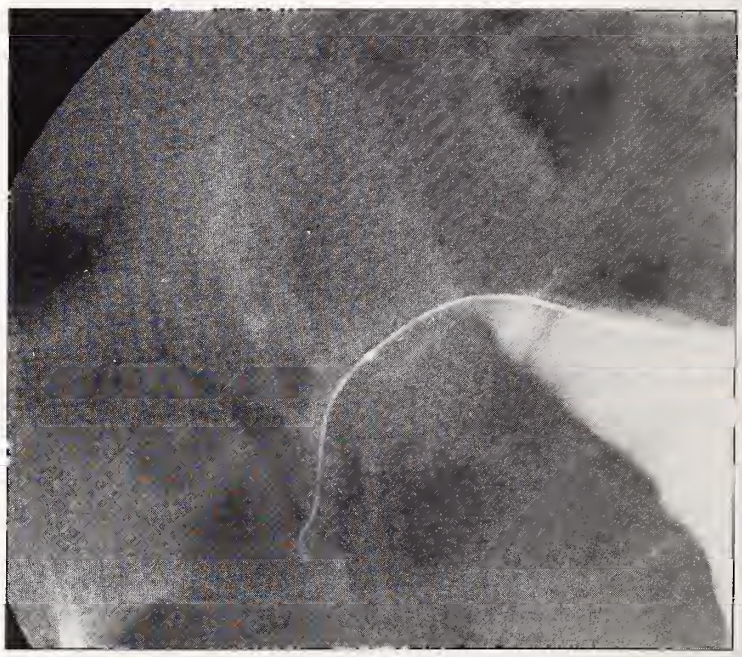


Figure 4. The .018 inch guidewire is advanced beyond the right fallopian tube occlusion demonstrated in figure 1.

pingograms at an average of five months following TFTR; in those patients, 67% of the recanalized tubes have remained patent. Repeat TFTR was attempted and again was successful at recanalizing the occluded fallopian tubes in two of the three remaining patients.

The benefits of TFTR are twofold: diagnostic and therapeutic. After successful recanalization of the proximal fallopian tube, salpingography will provide additional information regarding the remainder of the fallopian tube. If the recanalized fallopian tube appears normal in its entirety, laparoscopy may be postponed in hopes of achieving conception.[8] In other cases, therapeutic planning may be aided by the detection of abnormalities in the more distal fallopian tube. In larger series of patients undergoing TFTR, the overall conception rate is 31% following this procedure.[6] In the subgroup of patients who have radiographically normal tubes without disease beyond the initial occlusion site after recanalization, the conception rate is 47% in the six-month period after the recanalization procedure.[6] This rate is comparable to that achieved following microsurgical tubal repair.



Figure 5. Patent right fallopian tube is demonstrated following TFTR in this patient also illustrated in figures 1 and 4. Radiopaque dot marks the end of the 3 Fr catheter within the tube.

Conclusion

In summary, transvaginal fallopian tube recanalization is a safe, nonsurgical technique for treating infertile women with proximal fallopian tube occlusion. Depending upon the physician's experience, the technical success rate of this procedure approaches 90%. When successful, TFTR provides more diagnostic information than hysterosalpingography and results in conception rates comparable to those of surgical repair of the fallopian tube. ❑

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Adolescent Pregnancy

Eleanor Elaine Wilson Greene, M.D., M.P.H., and Shelia Cromer, R.N., FPNP, M.P.H.

Among industrialized countries, the United States ranks first in the serious problem of adolescent pregnancy.[1] In order to understand the reasons behind this disturbing fact, let's look at adolescent pregnancy and its related issues (figure 1).

Adolescent sexuality leads to adolescent pregnancy and to sexually transmitted disease and associated complications. Adolescent pregnancy results in a high number of out-of-wedlock births, abortions, and medical complications of pregnancy. More out-of-wedlock teen births mean more female heads of household. Female heads of household in general experience higher poverty rates. Almost three-fourths (74.2%) of families with female heads under 25 years of age were living in poverty in 1985. For white families the figure was 68% while it was 86% for black families.[1] Why such a high poverty rate? Women who give birth as teenagers accumulate less work experience, receive lower wages and earn less annually than women who give birth later in life.[1] Since these women are unable to provide for themselves and their children, society bears the social and economic costs.

After considering these issues, we as health care providers and parents must ask: How do we break the cycle of despair and high economic and social costs borne by teens, their families, and society? The simple answer would be to prevent or delay adolescent sexuality; yet the current trend is just the opposite as more adolescents are engaging in sexual intercourse.[2]

From 700 N. Elm Street, Suite 102, High Point 27262.

In 1970, fewer than one-third of adolescent women in the U.S. were sexually experienced. This rose to more than half by 1988. Among the nine million teenagers in the United States in 1988, 53% (almost 4.9 million) had experienced premarital intercourse.[1]

When we consider segments of this population contributing to the increase, we note another change. Although the proportion of black teenage girls having premarital sexual experience is slightly higher than that of white girls, the gap narrowed between 1970 and 1988. This finding is due to the greater relative increase in premarital sexual experience of white adolescent females. The increase during the 1980s in the proportion of teenagers who had ever had sexual intercourse was primarily attributed to increases among white and more affluent teens. The rate was stable, at a high level, among teenagers who are black, Hispanic, or poor. Thus the differentials that once existed among black and white and poor and those with more affluent backgrounds have greatly diminished.[2]

There are many reasons for the trend of increasing sexuality and pregnancy rates among teens. A lack of self esteem and self confidence makes it harder to say "no" for fear of losing a boyfriend or girlfriend. A pervasive hopelessness about the future exists for many teens who see so much despair around them that they see no hope for a better life. These teenagers live for the pleasure of the moment. Movies and TV glamorize sex between unmarried people, making it appear to be okay and acceptable. Many teenagers have dysfunctional families which provide very little emotional support. Children are left to fend for themselves at an early age. Because of situations in which two parents are working or a single parent is working, teens are allowed idle, unsupervised time at earlier ages. This allows opportunities for sexual experimentation.

The Educational Gap

Unrealistic attitudes and taboos exist about sex in the U.S. Often parents are unable to talk about sexuality with children. Schools have often been unable or unwilling to fill this educational gap. Because of taboos about sex, teens get the feeling that planning to be sexually active is wrong, but if it just happens, then they are somehow less at fault. This allows them to continue to engage in sexual intercourse, and it risks unintended pregnancy. Because many teenagers miss formal frank discussion on sexuality with responsible adults, their sources of information are peers and TV. Both may provide erroneous information leading to unintended pregnancy.

In a survey of pregnant teens by the North Carolina Coalition on Adolescent Pregnancy (NCCAP),[3] the young women gave several reasons for not using contraception when they became pregnant:

31%	I didn't think I could get pregnant
29%	I was afraid that my parents might find out I was having sex
19%	I was afraid of medical problems if I went on the pill
11%	I stopped the pill because it was making me sick

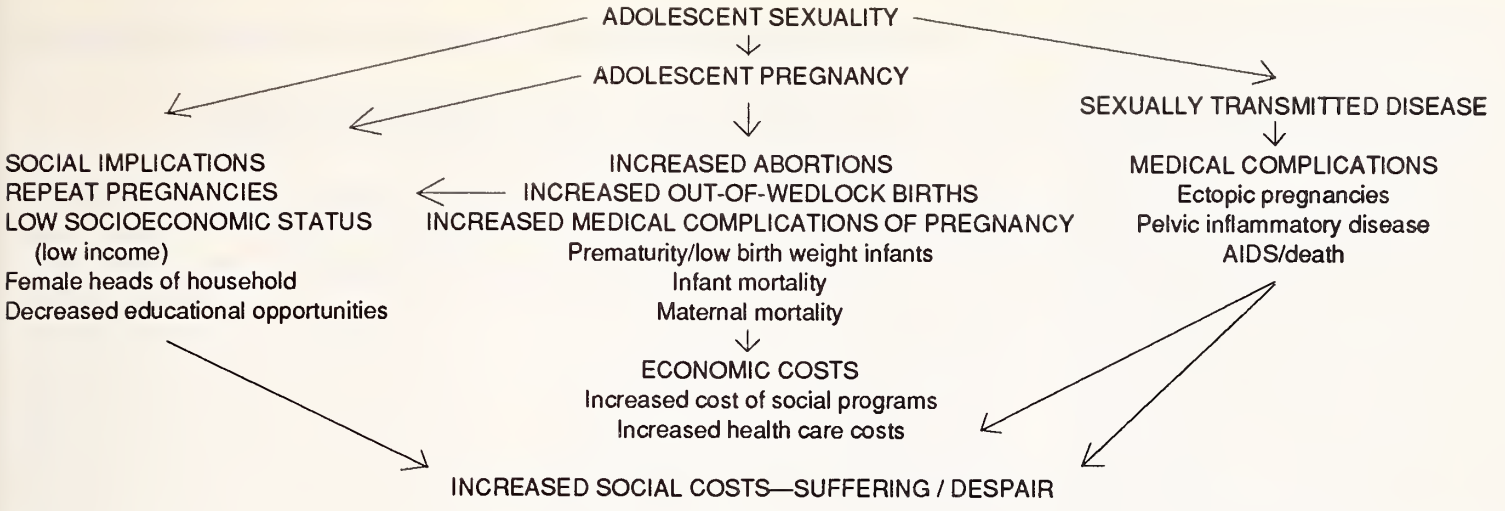


Figure 1

9% I wanted to get pregnant and have a baby.[3]

Correct information and education might have protected the group who didn't think they could get pregnant. Education also could have helped the group who stopped taking the pill for fear of medical problems, as the medical risks of adolescent pregnancy are higher than the risks of taking birth control pills.[1]

Breaking the Cycle

What can be done to break the cycle? Industrialized countries with lower adolescent pregnancy rates have comprehensive sex education in the school curriculum throughout the primary and secondary grades. Possibly this eliminates some of the misinformation spread by uninformed peers. Education should be one facet of the solution.

Abstinence should be emphasized in a sex education program for children and adolescents. The longer sexuality is delayed, the better. If there is no teen sexual intercourse then no teen pregnancies will occur. But reality tells us that not all teens will abstain. For society to turn its back on this group, and say they deserve to become teen parents and suffer all of the associated problems, is cruel. It is also costly—economically and socially. Since we all bear the costs, it is in the best interest of all to prevent adolescent pregnancy. Once the teen decides to become sexually active, contraception should be available at a reasonable cost. School-based clinics could provide basic health screening and offer contraceptive methods for sexually active teens.

More community-based programs need to be directed at building self-esteem and developing decision-making skills. These programs should involve children at early ages. Parents need to get involved. With 58% of mothers working today and fathers generally working or absent, childrearing is left to others, sometimes to other children. When parents get home, often they are too tired to take time to spend with children helping them develop emotionally and socially.

Teens and families should be involved in church and other community-based programs for adolescent pregnancy prevention. Parents and others should organize for more responsibility in the media concerning the messages communicated to children.

We need continued focus on the problem, support of existing institutions and preventive programs, and the development of new initiatives to see a successful resolution of the problem of adolescent pregnancy. ❑

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Insurance Coverage of Screening Mammography and Pap Smears

The Directors of North Carolina's University-Based Cancer Centers Speak Out

Robert C. Bast, Jr., Robert L. Capizzi, Joseph S. Pagano, and Albert L. Wiley, Jr.

Each year thousands of American women die unnecessarily from breast and cervical cancer. In 1991 breast cancer will claim the lives of an estimated 44,500 women in the United States; 1,300 North Carolinians will die from the disease. Cancer of the cervix will claim the lives of another 4,500 women, 150 of whom will be residents of North Carolina.[1] Although periodic screening with mammography and Pap smears hold out the promise that these deaths can be reduced, tragically that promise has been only partially fulfilled.

The problem is not a lack of effectiveness of these screening tests. Controlled trials and case-controlled studies in the United States and Europe have convincingly shown that periodic screening with mammography will reduce breast cancer mortality by as much as one-third in women 50 and older.[2] Based on years of accumulated evidence from observational and case-controlled studies, expert groups have recommended periodic screening with Pap smears.[3] Despite encouraging improvements in therapy, early detection remains the best hope of cure.

From the Duke Comprehensive Cancer Center, Duke University (RCB), the Comprehensive Cancer Center of Wake Forest (RLC), the Lineberger Comprehensive Cancer Center of The University of North Carolina at Chapel Hill (JSP), and the Leo Jenkins Cancer Center, East Carolina Unverstiy (ALW).

The problem is that not enough women, especially lower income and minority women, are obtaining regular screening for breast and cervical cancer.[4-8] For breast cancer screening, the good news is that use of mammography is increasing. Between 1987 and 1990 the percentage of U.S. women ages 40 and older who had ever had a mammogram increased from 37% to 64%.[5-6] The bad news is that women are not getting repeat mammograms on a regular basis. In 1990 only 31% reported following the consensus guidelines for periodic screening. Consensus guidelines from the American Cancer Society, the National Cancer Institute and 11 other expert groups suggest that mammograms be performed every one to two years in women from age 40 to 49 and annually after age 50.

For cervical cancer screening, while most women report having at least one Pap smear, only 73% of women ages 45-64 report adequate screening.[7] Guidelines for this procedure recommend annual screening beginning at age 18 or at the onset of sexual activity, with less than annual screening after a series of negative tests.

Educating and encouraging women to obtain periodic mammograms and Pap smears is an important task for physicians. Many women do not know that screening is important to their health. In the 1987 National Health Interview Survey, about half of the women ages 50 to 74 who had not had a mammogram in the past three years said that they did not need one.[5] In a more recent survey, 40% of women who had not had a mammogram said that one was not needed because no one in their family had ever had breast cancer.[6]

It is vital that physicians recommend breast cancer screening for their patients. Nearly 75% of women obtaining mammograms report that their physicians's recommendation was a major reason for participating in the screening procedure.[6] In contrast, 45% of women who did not obtain mammography said that their physicians had not encouraged them to do so. When performing clinical breast examinations, physicians may be missing the opportunity to recommend screening mammography.[8] According to a report by the National Cancer Institute's Breast Cancer Screening Consortium, 46% to 76% of eligible women had had a clinical breast examination in the past year, but only 25% to 41% had had a mammogram.

Cost is a very important barrier to breast and cervical screening, especially to mammography. Although Medicare now pays for biannual screening mammography for those ages 65 and older, third-party payers generally do not cover this procedure, and physicians appear reluctant to ask women to pay for breast cancer screening out-of-pocket.[9] Affordability was the reason most fre-

New NC Legislation

Physicians and patients of North Carolina should be extremely grateful to research and lobbying efforts provided by "Life-Savers," a state-wide coalition of North Carolina organizations committed to reducing breast and cervical cancer mortality by increasing the access of North Carolina women to screening mammograms and Pap smears.

Very active on this committee, and to be specifically acknowledged are Dan Sullivan, M.D., Department of Radiology, Duke University Medical Center, Michael O'Malley, Ph.D., UNC Lineberger Comprehensive Cancer Center, and Laura Bingham, Duke University Comprehensive Cancer Center.

The results of the efforts of Life-Savers is that the General Assembly of North Carolina ratified a bill requiring mammogram and Pap smear coverage in health and accident insurance policies, in hospital or medical service plans, and in HMO plans effective January 1, 1992. The law applies only to state-regulated policies (thus excluding self-insured plans), and does not cover the State Employees' health plan.

Summarizing this new law: Insurers must either apply the cost of the procedure toward patient's deductible or provide coverage for low-dose screening mammograms as follows: (1) One or more mammograms a year as recommended by a physician for any woman who is at risk for breast cancer (defined at risk if any one or more of the following is true: the women has a personal history of breast cancer a personal history of biopsy-proven benign breast disease, a mother, sister, or daughter who has had breast cancer, or has not given birth prior to the age of 30). (2) One baseline mammogram for any woman 35 to 39 years of age, inclusive. (3) A mammogram every other year for any woman 40 to 49 years of age, inclusive, or more frequently upon recommendation of a physician. (4) A mammogram every year for any woman 50 years of age or older. This law specifies that the mammogram must be performed by an accredited facility. Additionally, insurers must provide coverage for Pap smears once a year or more frequently if recommended by a physician. Coverage shall include the examination, the laboratory fee, and the physician's interpretation of the laboratory results. The laboratory must be an accredited facility.

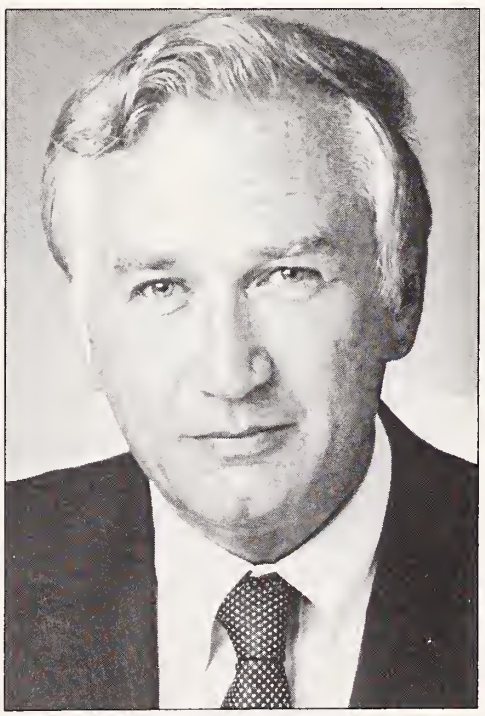
—Margaret L. Bertrand, M.D., Guest Editor



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Robert C. Bast, Jr., M.D., Director, Duke Comprehensive Cancer Center.

"As Directors of the four university-based Cancer Centers in North Carolina, we encourage our fellow physicians to recommend regular breast and cervical cancer screening to their patients. We support legislative and other efforts that will lower financial barriers to screening mammography and Pap smears."

quently cited by primary care physicians for not following breast cancer screening guidelines.[10] Studies have also shown that increased out-of-pocket costs and lack of insurance coverage deter women's use of mammography.[11] Analysis of National Health Interview data has revealed that women in the age group of 45-64 years who did not have insurance were one-and-a-half times more likely not to have adequate cervical cancer screening.[9] Data from the Rand Health Insurance Study also show that higher out-of-pocket costs were associated with decreased use of cervical cancer screening.[12]

North Carolina can be proud of its leadership in cancer care and research. The state has four university-based Cancer Centers, including three that have been designated as Comprehensive Cancer Centers by the National Cancer Institute. Only North Carolina and New York have three such centers. With such outstanding medical institutions, North Carolina should be a leader in reducing financial barriers to breast and cervical cancer screening and thus in reducing cancer mortality. On July 2, 1991, the North Carolina General Assembly passed a law requiring insurance companies to cover screening mammography and Pap smears beginning January 1, 1992. North Carolina became the thirty-seventh state to pass such legislation.

As Directors of the four university-based Cancer Centers in North Carolina, we encourage our fellow physicians to recommend regular breast and cervical cancer screening to their patients. We support legislative and other efforts that will lower financial barriers to screening mammography and Pap smears.

With these safe, effective and widely available screening tools, we have the means to reduce the unnecessary deaths from breast and cervical cancer. As physicians and policy makers, we now need to make a reality of the promise that breast and cervical cancer screening holds for saving lives in North Carolina. ❑

Acknowledgments

The cancer center directors would like to thank Michael O'Malley, Assistant Director of the Lineberger Comprehensive Cancer Center, and Dr. Daniel Sullivan, Department of Radiology at Duke University, for their help in researching and editing this piece.

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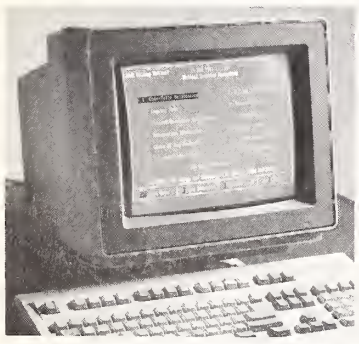
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Upper Extremity Disorders Commonly Seen In Women

Elizabeth M. Meyerdierks, M.D.

Are women more likely to develop problems with their arms and hands? With this issue of the *North Carolina Medical Journal* focusing on women, the question arose as to why certain disorders are more commonly seen in women. Ganglion cysts, carpal tunnel syndrome, most forms of arthritis, and many types of tendonitis top the list of women's upper extremity problems in my hand practice, and other statistics back up my observations. At the Hand Center of Greensboro in the past year, 15% of patient visits fell into the above categories, and of those 73% were women.

Are these statistics due to anatomical variation? Occupational variation? Or are the ever-present "hormonal" changes that occur in women responsible for their plight? Most of these questions have been addressed in the literature on carpal tunnel syndrome, but opinions vary and the answers are not clear. By reviewing four categories of upper extremity disorders more commonly seen in women, I hope to increase awareness, leading to earlier diagnosis and treatment, and alleviate the fears of the many women who might be at risk.

Ganglia

Ganglia are reported to be three times more common in women than in men.[1] They are cystic structures attached to a joint capsule, tendon, or tendon sheath. Most common between the second and fourth decade, a ganglion can arise from multiple sites in the hand and wrist. Most noticeable is the dorsal wrist ganglion that typically arises from the scapholunate interval and presents as a painless mass. It is filled with a gelatinous fluid that can only be decompressed externally due to a one-way valve effect from the joint. Pathogenesis is unknown, but many patients can attribute the appearance of a ganglion to trauma.

The chief complaint is usually the appearance of a mass but can often be pain or weakness of the wrist if there is associated bony or ligamentous involvement. On exam, a nontender mass that will transilluminate is present. If the ganglion is deep to the extensor retinaculum it may be difficult to palpate but will often be the cause of a "fullness" with pain on extremes of wrist motion. Aspiration of cystic fluid can confirm the diagnosis.

A ganglion can occur on the volar aspect of the wrist and usually presents on the radial side. Again it typically is not painful but is very noticeable. Volar ganglia are often adherent to the radial artery and may feel pulsatile. They can be confused with an aneurysm but aspiration away from the pulsatile area should yield cystic fluid.

Ganglia in the hand can arise from any of the joints or the tendon sheaths. Mucous cysts or ganglia of the distal interphalangeal (DIP) joint will be discussed later with osteoarthritis, since these are normally associated with arthritic change. The volar retinacular ganglion originates from the flexor tendon sheath at any site between the metacarpophalangeal (MP) and DIP joint. Usually seen at the proximal flexor sheath, it is often painful when a sufferer grips small objects. It feels like a firm "pea" or nodule in the palm and does not move with range of motion of the digit. It may be asymptomatic initially but often becomes painful once it is recognized. Treatment of an asymptomatic ganglion should be reassurance that the mass is benign and that it often will not cause symptoms. The old "bible treatment" is rarely used; however, aspiration with multiple puncture sites is comparable. By removing the fluid or allowing it to disperse into the soft tissues, the mass may not recur. More likely, though, it returns anywhere from one week to one year later. If a ganglion is painful, aspiration with short-term splinting may relieve symptoms. If symptoms recur, surgical excision is usually successful, but the chance of recurrence has been reported to be as high as 20%.

Arthritis

The word arthritis evokes visions of disabling deformity of the hands. This can be the case with rheumatoid arthritis, but patients with osteoarthritis maintain surprising function with the amount of deformity that develops. Both types affect

From The Hand Center of Greensboro, Greensboro, NC 27401.

the hands, and more commonly so in women. Rheumatoid arthritis is two to three times more prevalent in women.[2] For osteoarthritis, prevalence is comparable. There are dramatic differences, however, in the pathology, progression of disease, and surgical treatment.

Rheumatoid arthritis is a systemic disease that attacks synovial tissue. The joints and extrinsic tendons are affected leading to a loss of the balance in the hand. Patients will present early with swelling or pain, but more often come to see the hand surgeon after their diagnosis has been confirmed. By that time tendon ruptures may have occurred and synovitis and deformity are easily detected.

Early in the disease course, ulnar drift of the MP joints with synovial proliferation over the dorsal wrist are common. The chief complaint may be loss of ability to extend or flex the fingers or thumb if tendons have ruptured. Later on there may be development of swan neck or boutonniere deformities in the fingers with zig zag instability of the thumb. By this time, dexterity and strength are minimal.

Conservative treatment is performed medically. Joint protection instruction and splinting by an experienced hand therapist should be utilized early in the course of the disease. Surgical treatment of rheumatoid arthritis can be considered early to prevent deformity or later to correct it. Preventive procedures include synovectomy with bony spur debridement to avoid tendon rupture, and tendon balancing procedures to prevent fixed deformities. Later procedures are aimed at relieving pain, but can be considered for correction of deformity, realizing that weakness and loss of dexterity will be present. These include replacement arthroplasty and fusion of joints.

In contrast to rheumatoid arthritis, primary osteoarthritis affects only the joints, resulting in loss of articular cartilage. Complaints may be pain, swelling, stiffness, or deformity usually presenting in the carpometacarpal (CMC) joint of the thumb, or proximal interphalangeal (PIP) and DIP joints of the fingers. With osteoarthritis, joints may acutely flare, resolve with treatment, and become dormant for months. The gross imbalance of the hand does not occur with osteoarthritis as it does with rheumatoid arthritis.

On examination, enlarged joints are seen early with or without progression to angular deformity. Nodules can occur at the DIP joint (Heberden's nodes) or at the PIP level (Bouchard's nodes). Very early in the course, a groove in the nail may herald formation of a mucous cyst, which is a ganglion of the DIP joint often associated with osteoarthritis. The CMC joint of the thumb will be very tender with weakness of pinch and possible subluxation of the joint. Suspicion of osteoarthritis in the hand can be easily confirmed by x-ray changes of joint space narrowing, sclerosis, spur formation, and cystic changes.

Treatment of osteoarthritis is symptomatic. Nonsteroidal anti-inflammatory drugs are very effective in relieving pain, and splinting can carry a patient through an acute flare-up. Cortisone injection will give temporary pain relief but does not alter the progression of the disease. Surgical treatment is very successful for relief of pain when conservative measures have failed. Motion, stability, or strength, however, may be compromised. Arthrodesis and arthroplasty are the chief options, although joint debridement can be a temporizing procedure. This is particularly helpful with mucous cyst of the DIP joint, where excision of the cyst and debridement of osteophytes can relieve pain. The appropriate procedure depends on the age of the patient, functional requirements, and amount of disability.

Carpal Tunnel Syndrome and Tendonitis

These two categories are rampant in the literature on occupational disorders. Carpal tunnel syndrome and tendonitis are, respectively, five and 10 times more common in women.[3] Jobs involving highly repetitive movements of the hand and wrist are reported to be responsible for the increased incidence.[4,5]

Carpal tunnel syndrome is a compression neuropathy of the median nerve at the wrist. The etiology can't always be identified unless the nerve compression is related to a space-occupying mass in the carpal canal or to a systemic problem known to be related to carpal tunnel syndrome. A ganglion, malunited wrist fracture, or synovitis associated with rheumatoid arthritis are examples of space-occupying lesions, and many of these do have a high incidence in women. Carpal tunnel syndrome in pregnancy is thought to be secondary to fluid retention and often resolves after delivery. Systemic diseases are numerous with relation to carpal tunnel syndrome, but diabetes mellitus and thyroid disorders are the most common.

Classic symptoms are numbness and tingling in the fingers with a feeling of clumsiness or weakness in the hand. Generally there is pain in the hand and wrist that may radiate to the forearm. Symptoms seem to be worse at night but are also related to increased use of the hand. Physical exam should localize the problem to the median nerve by tenderness and a positive tinel's sign over the nerve at the wrist. Decreased sensation should involve the radial three and a half digits, and weakness should involve the abductor pollicis brevis muscle. A positive phalen's test causing increased pressure in the carpal canal may be the only physical sign. Occasionally sympathetic changes will be present such as temperature changes or alteration of the sweating pattern in the distribution of the median nerve.

Splinting and nonsteroidal anti-inflammatory drugs are used in the initial treatment of carpal tunnel syndrome. Many patients will respond well to this, if they also change their activities. Cortisone injection into the carpal canal is especially useful during pregnancy in the third trimester, when symptoms can be severe and will often resolve postpartum. If conservative measures fail, surgical decompression is indicated. A nerve conduction study can confirm the diagnosis prior to surgery.

In 1893, *Grays Anatomy* described first dorsal compartment tenosynovitis

(deQuervain's stenosing tenosynovitis) as "washer woman's sprain."[6] Movements used in activities such as wringing wet clothes were reported to be the cause. This may well be one of the first on-the-job injuries to be described. Today many forms of tenosynovitis are related to an activity performed at work which is typically repetitive. Trigger finger, extensor tendonitis, and deQuervain's stenosing tenosynovitis would all fall into this category of problems.

Trigger finger is an enlargement of the flexor tendon in the tendon sheath. It usually occurs at the A-1 pulley in the palm over the MP joint. The digits most commonly involved are the middle finger, ring finger, and thumb.

Patients complain of pain, locking, or snapping and will often describe their "joints dislocating." On examination, there is tenderness with a palpable nodule, and triggering with range of motion of the digit. Many times motion is limited secondary to pain.

Initial treatment of trigger finger is by Cortisone injection into the tendon sheath. This often relieves pain, but triggering may persist. Many times no further treatment is needed. If the injections are unsuccessful, surgical division of the A-1 pulley should be performed.

Extensor tenosynovitis can occur in any of the six dorsal compartments of the wrist. Complaints are usually swelling and pain with use. This condition is often attributed to repetitive movements, and physical exam reveals tenderness and pain on resisted motion. Anti-inflammatories, splinting, and occasional injection commonly relieve the pain. In addition, a change in activity is required.

When the first dorsal compartment is involved, the condition is called deQuervain's stenosing tenosynovitis. The abductor pollicis longus and extensor pollicis brevis tendons course along the radial aspect of the wrist and exit their sheath at the radial styloid. Irritation within the sheath occurs in ulnar deviation. Since most wrist activity is performed from a dorsoradial to a palmar ulnar direction, this disorder is very common.

Tenderness over the first dorsal compartment and pain on clasping the thumb with ulnar deviation of the wrist are objective signs of deQuervain's. Occasionally there is crepitance with range of motion and palpable thickening of the tendon sheath. X-rays will be normal but may help with differentiating carpometacarpal arthritis if present.

Again, treatment is nonsteroidal anti-inflammatories with splinting, and steroid injection into the tendon sheath. Surgery to divide the sheath is necessary if conservative treatment fails.

Discussion

Most of these disorders are well known to physicians, particularly if they have a practice that deals with Worker's Compensation injuries. Carpal tunnel syndrome and tendonitis have been considered cumulative trauma disorders. In North Carolina, the textile, furniture, and tobacco industries, along with companies assembling small parts, are acutely aware of the problems caused by highly repetitive movements. A high percentage of women are employed by these companies.

Two authors have addressed the upper extremity anatomy of women and men. Bleecker found that women have smaller carpal canals leading to a higher incidence of carpal tunnel syndrome.[7] Conklin addressed deQuervain's stenosing tenosynovitis and determined a sharper angulation of the first dorsal compartment in women.[8] Another area that could be investigated to determine why women are afflicted more often than men is joint laxity. Women are thought to have increased laxity, which could account for a higher incidence of arthritis and tendonitis.

In conclusion, the four topics reviewed have a higher incidence in women, and the reasons for this are not straightforward. Anatomy plays a role, as does activity. With more women joining the workforce, recognition of potential problems may be helpful for prevention and early treatment. ❑

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FOR PATIENTS

NORTH CAROLINA MEDICAL SOCIETY

Health Watch

VOLUME 52 / NUMBER 10 / OCTOBER 1991

Medicare

MEDICARE—THE BASICS

In 1965 the United States Congress passed legislation creating the Medicare program. Medicare is a Federal health insurance program for people 65 or older and those with certain disabilities. It is run by the Health Care Financing Administration (HCFA) of the United States Department of Health and Human Services. Local Social Security Administration offices take applications for Medicare and provide general information about the program. The following provides an overview of Medicare—how it operates, who is eligible, what services are covered and what benefits are offered.

How is the program organized?

The Medicare program has two parts—hospital insurance (Part A) and medical insurance (Part B). Part A helps pay for inpatient hospital care, inpatient care in a skilled nursing facility, home health care and hospice care. Part B helps pay for doctors' services, equipment and a number of other medical services and supplies that are not covered under Part A.

Both Parts A & B have amounts that you must pay out of your own pocket (premiums, deductibles, coinsurance payments) or through another insurance plan. These out-of-pocket amounts are set each year according to formulas established by Congress. New payment amounts begin each January 1. When these amounts increase you are notified by HCFA.

Who is eligible for Medicare?

You are eligible for Part A Medicare at 65 if:

- you receive benefits under the Social Security or Railroad retirement system, or
- could receive benefits under Social Security or the Railroad retirement system but have not filed for them, or
- you or your spouse had certain government employment.

North Carolina Medical Society, PO Box 27167, Raleigh, NC 27611.

You are eligible for Part B Medicare if:

- you receive Medicare Part A benefits
- you pay the monthly premiums for the Part B coverage
- you are a United States resident age 65 or over

What are intermediaries and carriers?

The Federal government contracts with private insurance organizations called intermediaries and carriers to process Medicare claims and make payments. Intermediaries (Part A) make coverage and payment decisions on services you receive in hospitals, skilled nursing facilities, home health agencies and hospices. Carriers (Part B) handle claims for services rendered by your doctor and other health care suppliers covered under Medicare's medical insurance program.

Applying for Medicare

If you are already getting Social Security or Railroad Retirement benefit payments when you turn 65, you will automatically get a Medicare card in the mail. The card will show that you can get both Part A (hospital) and Part B (medical) Medicare benefits. If you do not want the Part B coverage there are instructions that come with your card telling you what to do.

Some people will not automatically get a Medicare card. Persons who have not applied for Social Security benefits, Railroad Retirement benefits or have a kidney disease must file an application for Medicare benefits before receiving a card. If you must file an application you should do so during your initial enrollment period, to avoid late enrollment penalties under Part B. Your initial enrollment period is a seven month period that starts three months before the month you first meet the requirements for Medicare. If you do not sign up for Medicare during the first three months of your initial enrollment period, there will be a delay in starting your Part B coverage ranging from one to three months after enrollment. If you do not enroll for Part B at any time during your initial enrollment period, you will not get another chance to enroll until the next general enrollment period. The general enrollment period is held each year from January 1 through March 31. You may also be charged a premium penalty for the late enrollment.



Your Medicare card

Your card will show the type of coverage you have (Part A, Part B or both) and the date your protection started. It will also show your health insurance claim number. Sometimes this claim number is referred to as your Medicare number. You should always use the name and number exactly as shown on your card to avoid any delays in claim payment.

Your Medicare number will either have nine digits and a letter or nine digits, a letter and a digit. Your full claim number must always be included on all Medicare claims and correspondence. When a husband and wife both have Medicare, each will receive a separate card and claim number.

It is important that you remember to:

1) Always show your Medicare card when you receive services that Medicare can help pay.
2) Always write your health insurance claim number (including the letter) on any bills you send in and on any correspondence about Medicare. Also, you should have your Medicare card available when you make a telephone inquiry.
3) Carry your card with you whenever you are away from home. If you ever lose it, immediately ask your Social Security office to get you a new one.
4) Use your Medicare card only after the effective date shown.
5) Never permit someone else to use your Medicare card.

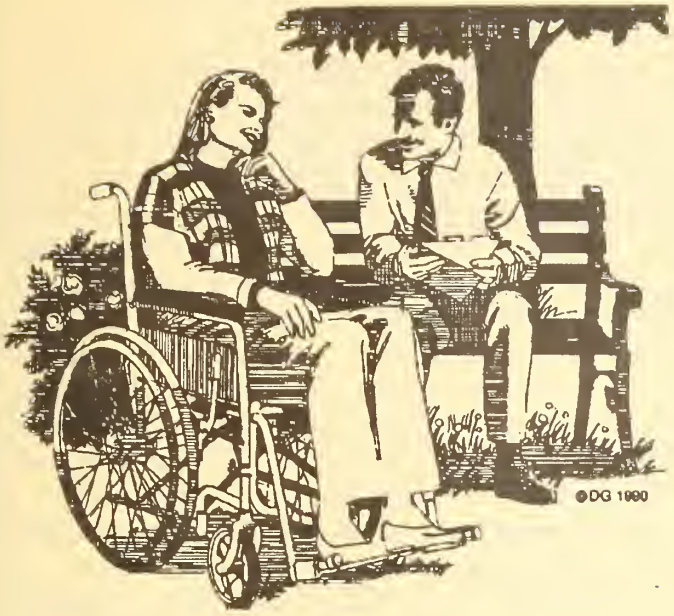
Medicare Covered Services

Medicare provides basic protection against the high cost of illness, but it will not pay all of your health care expenses. Under both Parts A & B there are services and supplies that are not covered by Medicare. Listed below are major services that are covered under Parts A & B as well as some of the services not covered in each category.

Part B

Major services covered by Part B

- Medical and surgical services, including anesthesia
- Diagnostic tests and procedures that are part of your treatment



- Radiology and pathology services by doctors while you are a hospital inpatient or outpatient
- Other services that are ordinarily furnished in doctors' offices and included in their bill, such as:
  - X-rays
  - Services of your doctor's office nurse
  - Drugs and biologicals that cannot be self-administered
  - Transfusions of blood and blood components
  - Medical supplies
  - Physical/occupational therapy and speech pathology services

Some services not covered by Part B

- Most routine physical examinations and tests directly related to such examinations
- Routine foot care
- Eye or hearing examinations for prescribing or fitting eyeglasses or hearing aids
- Immunizations (except pneumococcal vaccinations or immunizations required because of an injury or immediate risk of infection and hepatitis B for certain persons at risk)
- Cosmetic surgery, unless it is needed because of accidental injury or to improve the function of a malformed part of the body

Part A

Major services covered by Part A

- A semiprivate room (2 to 4 beds in a room)
- All your meals, including special diets
- Regular nursing services
- Cost of special care units, such as intensive care or coronary care units
- Drugs furnished by the hospital during your stay
- Blood transfusions furnished by the hospital during your stay
- Lab tests included in your hospital bill
- X-rays and other radiology services, including radiation therapy, billed by the hospital
- Medical supplies such as casts, surgical dressings and splints
- Use of appliances, such as a wheelchair
- Operating and recovery room costs
- Rehabilitation services, such as physical therapy, occupational therapy and speech pathology services

Some services not covered by Part A

- Personal convenience items that you request
- Private duty nurses
- Any extra charges for a private room unless it is determined to be medically necessary

Part B deductible and coinsurance

The first $100 in Medicare covered expenses is called the Part B deductible. This is what you must pay, either yourself or through a supplemental insurance policy. The deductible needs to be met only once during the calendar year and is simply the first $100 of covered expenses. You do not have to meet a separate deductible for each different kind of covered service you might receive.

After you have met the Part B $100 deductible, Medicare will pay 80 percent of the approved charges for all additional covered services you receive during the rest of the year. *(See example below.)* You are responsible for the remaining 20

Part B in 1991

Premium: $29.90 per month per individual (generally is deducted from an individual's Social Security benefit each month)

Deductible: $100 per year

Example

Physician Accepts Assignment

Charge: $100.00

Medicare approved amount: $80.00

You pay physician 20% of approved amount: $16.00

Medicare pays physician 80% of approved amount: $64.00

Physician Doesn't Accept Assignment

Charge: $100.00

Medicare approved amount: $80.00

You pay physician the full amount: $100.00

Medicare pays you 80% of approved amount: $64.00

Noncovered Services in both cases: You pay full amount

percent on **assigned** (your physician agrees to accept the charges approved by the Medicare carrier for the covered services and receives payment directly from the carrier) claims. On **nonassigned** (your physician does not accept the charges established by the Medicare carrier and may bill you for actual charges with you receiving payment from the Medicare carrier) claims you are responsible for paying the full amount billed by your doctor. Medicare determines the "approved" charge for each service you receive and reimburses you 80 percent of that amount.

Part A deductible and coinsurance

Medicare Part A helps pay for most but not all of the services you receive in a hospital, skilled nursing facility, home health agency or hospice program. *(See example below.)* Like Part B there are covered and noncovered services. Covered services are those services or supplies that the Medicare carrier will pay for. Also like Part B there is a deductible amount that must be met and coinsurance that is your responsibility to pay. These amounts are established each year by the Medicare carrier. You will be notified when these amounts are changed.

Part A in 1991

No premium (some exceptions but most people pay no premium)

Example

Hospitalization

Deductible: 1st day through 60th day in hospital - You pay $628, Medicare pays the rest for covered services.

61st day through 90th day - You pay $157 for each day, Medicare pays the rest for covered services.

91st to 150th day - You pay $314 for each day, Medicare pays the rest for covered services.

Beyond 150 days - Medicare pays nothing

Noncovered Services: You pay full amount

Assignment

The assignment method, in which the doctor or supplier receives the medical insurance payment directly from Medicare, can save you time and money. When the assignment method is used, the doctor or supplier agrees to accept the charge approved by the Medicare carrier for the covered services. Medicare pays your doctor or supplier 80 percent of the approved charge, after subtracting any part of the $100 deductible you have not met.

The doctor or supplier can charge you only for the part of the $100 deductible you have not met and for the coinsurance, which is the remaining 20 percent of the approved charge. Of course, your doctor supplier also can charge you for any services that Medicare does not cover.

If your doctor does not accept assignment, the doctor bills you for his or her actual charge (there is a limit to what you can be charged) and you are responsible for paying it. Medicare pays you 80 percent of the approved charge, after subtracting any part of the $100 deductible you haven't met.

Participating doctors and suppliers

Doctors and suppliers can sign agreements to become Medicare-participating doctors or suppliers. This means that they have agreed in advance to accept assignment on all Medicare claims. Doctors and suppliers are given the opportunity to sign participation agreements each year. Medicare-participating doctors and suppliers can display emblems or certificates which show that they accept assignment on all Medicare claims.

The names and addresses of Medicare participating doctors and suppliers are listed by geographic area in the "Medicare Participating Physician/Supplier Directory." You can get the directory for your area free of charge from Equicor (North Carolina's Medicare Carrier). It also is available for review in all Social Security offices, State and area offices of the Administration on Aging, and in most hospitals.

Where to go for more information

To find out more about the Medicare program you can write North Carolina's Medicare carrier Equicor at the following address: Equicor, PO Box 671, Nashville, Tennessee 37202 or call (800) 672-3071 (in North Carolina) or (919) 665-0348 (in Greensboro or outside North Carolina). ❑

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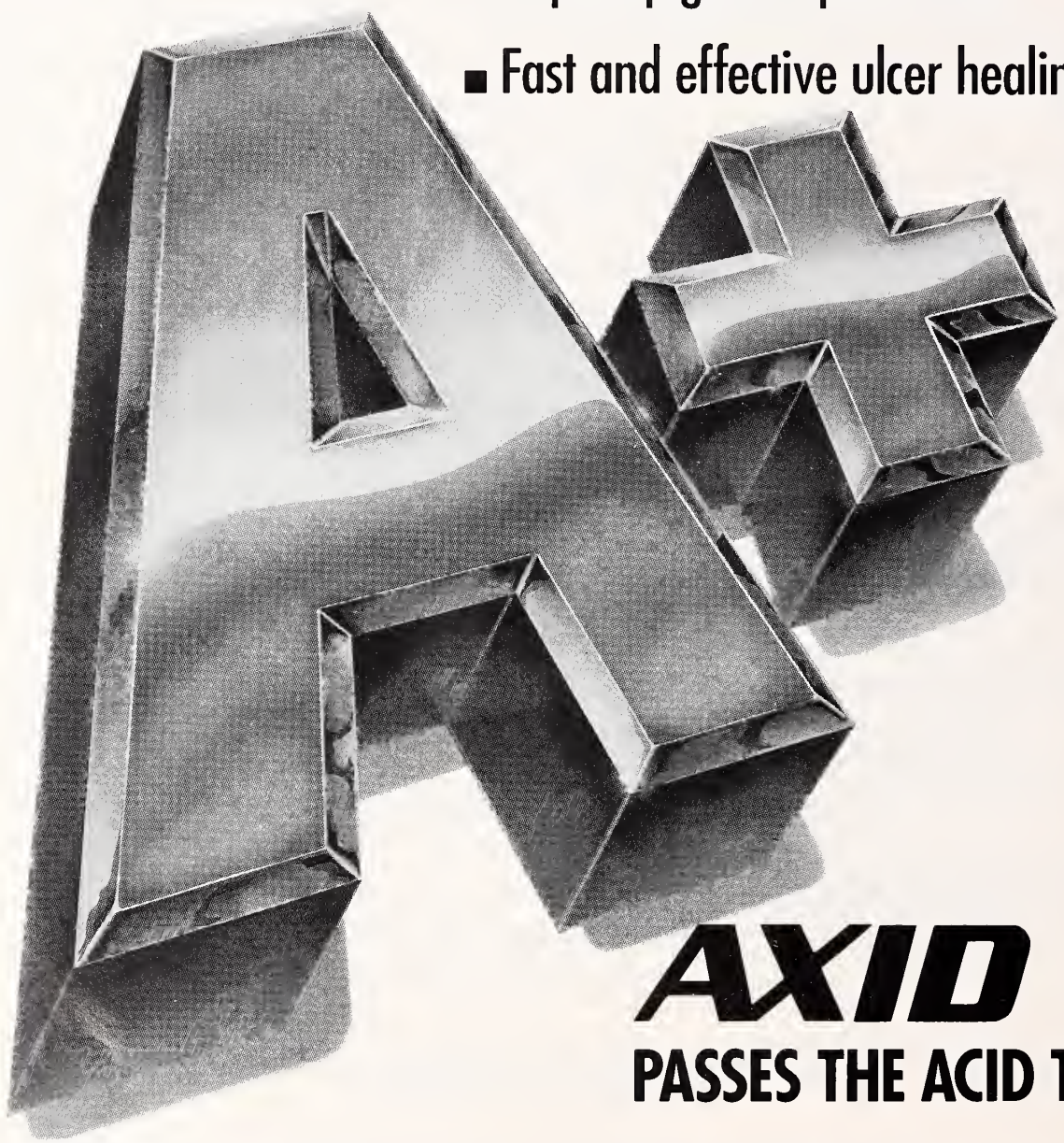
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See adjacent page for references and brief summary of prescribing information.

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Indications and Usage: 1. *Active duodenal ulcer*—for up to 8 weeks of treatment. Most patients heal within 4 weeks.

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Contraindications: Known hypersensitivity to the drug. Because cross sensitivity in this class of compounds has been observed, H_2-receptor antagonists, including Axid, should not be administered to patients with a history of hypersensitivity to other H_2-receptor antagonists.

Precautions: *General*—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Dosage should be reduced in patients with moderate to severe renal insufficiency.

3. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests—False-positive tests for urobilinogen with Multistix® may occur during therapy.

Drug Interactions—No interactions have been observed with theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450 enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increased serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility—A 2-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a 2-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a 2-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in 1 fetus, and at 50 mg/kg, it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in 1 fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers—Studies in lactating women have shown that 0.1% of an oral dose is secreted in human milk in proportion to plasma concentrations. Because of growth depression in pups reared by treated lactating rats, a decision should be made whether to discontinue nursing or the drug, taking into account the importance of the drug to the mother.

Pediatric Use—Safety and effectiveness in children have not been established.

Use in Elderly Patients—Healing rates in elderly patients were similar to those in younger age groups as were the rates of adverse events and laboratory test abnormalities. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of varying durations included almost 5,000 patients. Among the more common adverse events in domestic placebo-controlled trials of over 1,900 nizatidine patients and over 1,300 on placebo, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common with nizatidine. It was not possible to determine whether a variety of less common events were due to the drug.

Hepatic—Hepatocellular injury (elevated liver enzyme tests or alkaline phosphatase) possibly or probably related to nizatidine occurred in some patients. In some cases, there was marked elevation (>500 IU/L) in SGOT or SGPT and, in a single instance, SGPT was >2,000 IU/L. The incidence of elevated liver enzymes overall and elevations of up to 3 times the upper limit of normal, however, did not significantly differ from that in placebo patients. All abnormalities were reversible after discontinuation of Axid. Since market introduction, hepatitis and jaundice have been reported. Rare cases of cholestatic or mixed hepatocellular and cholestatic injury with jaundice have been reported with reversal of the abnormalities after discontinuation of Axid.

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in 2 individuals administered Axid and in 3 untreated subjects.

CNS—Rare cases of reversible mental confusion have been reported.

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to nizatidine. Impotence and decreased libido were reported with equal frequency by patients on nizatidine and those on placebo. Gynecomastia has been reported rarely.

Hematologic—Fatal thrombocytopenia was reported in a patient treated with nizatidine and another H_2-receptor antagonist. This patient had previously experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity—As with other H_2-receptor antagonists, rare cases of anaphylaxis following nizatidine administration have been reported. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine have been reported.

Overdosage: Overdoses of Axid have been reported rarely. If overdosage occurs, activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis does not substantially increase clearance of nizatidine due to its large volume of distribution.

PV 2091 AMP
[091190]

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2. *Scand J Gastroenterol.* 1987;22(suppl 136):61-70.
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NZ-2943-B-149347

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Breast Preservation

Where Are We?

Carolyn R. Ferree, M.D., and Kathryn M. Greven, M.D.

Breast-conserving surgery, or "lumpectomy," followed by radiation therapy has become a very viable alternative to modified radical mastectomy for most patients with early-stage breast cancer. During the past 25 to 30 years, large studies have been completed, and none of these studies have suggested that survival rates with this conservative treatment are inferior to those achieved with standard mastectomy. In fact, some of these studies suggest that the survival rate is better with breast-conserving surgery and irradiation. Because both mastectomy and lumpectomy followed by irradiation are local procedures, neither is thought to affect survival, which is determined by distant metastasis. Lumpectomy alone results in a 38% local recurrence rate despite "negative" margins, but with the addition of radiation, recurrence can be reduced to 5%-10%.

Although many patients with Stage I and Stage II Breast cancer are eligible for breast-conserving surgery and radiation, some selection criteria have been established. Scattered microcalcifications in the breast are associated with an increased risk of gross disease and/or multicentric disease, thereby potentially increasing tumor recurrence. Collagen-vascular disease increases the risk of significant fibrosis of the breast after irradiation and therefore should probably be considered a contraindication for conservative management. Patients with large pendulous breasts, in addition to presenting technical problems, have more fibrosis after treatment and may have a poorer cosmetic outcome. Patients with tumors up to 5 cm are candidates if surgical removal results in good cosmesis. Even patients with a discrete subareolar tumor may have an acceptable cosmetic outcome following removal of the nipple complex. The presence of axillary nodes is not a contraindication to conservative surgery and radiation. With a combination of chemotherapy and radiation, local recurrence rates are very low.

The major objectives of conservative management are preservation of the breast, acceptable cosmetic results, and low risk of recurrent breast disease. Therefore, careful presurgical evaluation, including physical examination and film-screen mammography with appropriate magnification views, is essential. Preoperative examination by a radiation oncologist may help to prepare the patient and confirm her eligibility for treatment. Pathological evaluation of the tumor characteristics and extent of disease, with particular attention given to the margin of resection, is important for treatment planning.

Five prospective randomized studies have compared mastectomy (M) with conservative surgery and radiation (CS+R) (table 1). The National Surgical Adjuvant Breast Project Protocol 6 study, one of the most important studies in the

Table 1
Survival results from prospectively randomized trials

Study	No. Patients	Stage	Follow-up Median (yrs)	5-Year Actuarial Survival M	CS+R	CS
NSABP[1]	1855	I,II	8	71%	76%	70%
NCI[2]	224	I,II	4	84%	88%	
WHO[3]	179	I	10	92%	92%	
Milan[4]	701	I	8.6	90%	92%	
Denmark[5]	859	I,II	6	82%	79%	

(M=Mastectomy; CS+R=conservative surgery and radiation therapy; CS=conservative surgery alone)

From the Division of Radiation Oncology, Bowman Gray School of Medicine, Winston-Salem 27103.

Table 2
Recurrence in the breast following treatment with CS+R for noninvasive intraductal carcinoma
(*indicates crude recurrence rates)

Series	No. Patients	Breast Recurrence 5-Year Actuarial	Median Follow-up (mos)
Solin[6]	51	6%	68
Fisher[7]	29	7%*	39
Kurtz[8]	44	4%	61
Bornstein[9]	38	8%	81
Zafrani[10]	54	6%*	55

United States, randomized 1,855 patients between M, CS+R, and conservative surgery (CS) alone. With an average follow-up of eight years, survivals are statistically equal at 71%, 76% and 70%, respectively. Patients treated with CS alone had a local recurrence rate of 40%, but the local recurrence rate was only 10% for the CS+R group. Most recurrent breast tumors were within the same quadrant as the original tumor. At least 50% of patients with such recurrences can be salvaged with a mastectomy and achieve long-term survival, in contrast to the small percentage of patients who achieve disease-free survival after mastectomy, when the recurrence is on the chest wall. The addition of chemotherapy to CS+R in node-positive patients decreased the local recurrence rate to 4%. Since the local recurrence rate was 43% despite chemotherapy in the group treated with CS alone, these results suggest the interesting possibility of a synergistic effect between chemotherapy and radiation therapy.

Improvements in mammography and increased emphasis on screening and early detection of breast cancer have dramatically increased the proportion of noninvasive cancers detected in the past 10 years. In some institutions the incidence of noninvasive cancer is now as high as 30%, compared to less than 5% 10 years ago. Because CS+R is acceptable therapy for small invasive cancers, it is difficult to recommend the traditional mastectomy for ductal carcinoma *in situ* (DCIS), although the data supporting more conservative procedures are immature.

The recently closed NSABP B-17 study randomized more than 800 patients between CS+R and CS alone. However, long-term follow-up will be necessary before results can be considered reliable. Several smaller retrospective studies have reported outcomes similar to those for invasive cancer, but again, longer follow-up is needed. It is generally believed that patients must be carefully selected to assure recurrence rates of 10% or less (table 2). Patients with focal lesions confined to a single quadrant of the breast, negative resection margins, no evidence of residual microcalcifications on a postbiopsy mammogram, and primary tumors no larger than 2.5 cm are considered appropriate candidates for conservative management. The histologic subtype may also be a selection factor, since recurrence is more frequent with the comedo subtype and necrosis than with the cribriform or papillary subtype. Obviously, for a few small lesions conservation surgery alone may be adequate, but this subset has not yet been well identified.

In conclusion, CS+R is a viable, in some cases preferable alternative for many patients with early-stage invasive cancer of the breast as well as for carefully selected patients with DCIS. The patient must be committed to long-term, thorough physical and radiographic follow-up examinations and should be psychologically committed to keeping her breast. The cosmetic results in all reported series have been good to excellent in 85% to 90% of cases. The rate of minor complications is 5% to 10%, and serious complications are few. With survival rates equal to those achieved with mastectomy, and excellent local control rates when appropriate selection criteria are observed, CS+R offers many women the option of breast preservation. ❑

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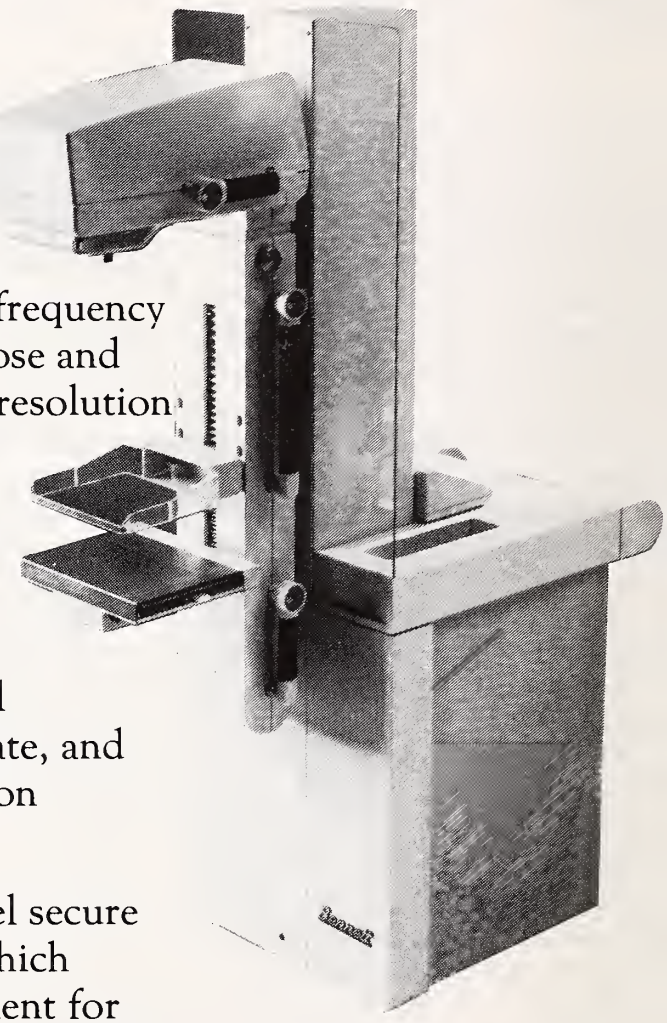
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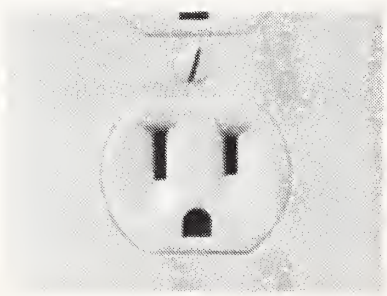


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Mammography: Evaluation Following Breast Augmentation

Margaret E. Williford, M.D.

Several studies in this country and abroad have established that routine screening mammography at regular intervals can reduce mortality due to breast cancer in women over 40 years of age.[1] Although no large studies have specifically addressed the value of mammography in patients who have had breast augmentation, these experiences suggest that screening mammography is also beneficial for these women. Performing and interpreting the mammogram is complicated by the presence of prostheses and the changes induced by the surgery; however, routine screening mammography, as well as diagnostic mammography, are beneficial for women who have had reconstructive or aesthetic breast surgery. Diagnostic mammography can be especially useful in evaluating benign conditions or complications which may affect patients following breast augmentation.

Techniques

Low-dose, film-screen mammography is currently the preferred technique; however, xeromammography remains an accepted alternative technique. Film-screen mammography is done with dedicated x-ray machines specifically designed for mammography. The modern screen-cassettes and films make it possible to obtain high-contrast, high-resolution films with a radiation dose to the breast of approximately 0.1 rad per exposure. This dose is much lower than was possible a decade ago, and makes the benefit of mammography far outweigh the theoretical risk.

Firm compression of the breast is necessary and critical in obtaining good quality low-dose mammograms. This generates complaints from some patients, but the majority of women find the examination tolerable.[2] Unfortunately, breast implants interfere with the administration of adequate compression of the breast parenchyma. First, the prosthesis limits the amount of compression that may be applied by the compression paddle. Second, as the compression paddle pushes against the prosthesis, the prosthesis bulges forward, crowding the overlying breast tissue into the anterior part of the breast (figure 1). Furthermore, some of the parenchyma will be superimposed on the prosthesis and will not be visible on the mammogram at all.[3] To overcome these problems, additional films must be obtained where the prosthesis is manually pushed back against the chest wall and compression is applied only to the anterior breast parenchyma (figure 2).[4] These films provide much better visualization of the anterior breast parenchyma (figure 3). These films are done in addition to the standard craniocaudal and oblique mediolateral views so that a total of four views per breast are necessary to obtain adequate images of the augmented breast. Even with these additional images there may still be some posterior, peripheral breast tissue that is obscured by the prosthesis. When a patient has a palpable mass or other focal clinical finding, additional views, specifically of the questionable area, may be obtained.

It has been suggested that saline implants are less likely than silicone gel prostheses to obscure lesions on mammography.[5,6] While this is probably true, saline prostheses do not have the desired consistency of silicone gel and have not gained wide clinical acceptance. Studies are being conducted to evaluate other substances as potential filling materials for implants.[7] The goal is to find a material that will have an acceptable consistency for cosmesis, yet be relatively transparent to x-rays.

Mammography can be satisfactorily performed in patients with either submuscular or subglandular prostheses (figure 4). There are no studies to indicate whether submuscular or subglandular placement of the implant is preferable in terms of mammographic evaluation of the breast parenchyma; however, some mammographers believe that submuscular placement of the prosthesis is preferable.

Ultrasound is a useful complementary technique to mammography. The primary use of breast ultrasound is to determine whether masses are cystic or solid.[8] Both palpable and non-palpable masses may be evaluated with ultrasound but the mass must be at least 1 cm in

From Department of Radiology, Duke University Medical Center, Durham 27710.

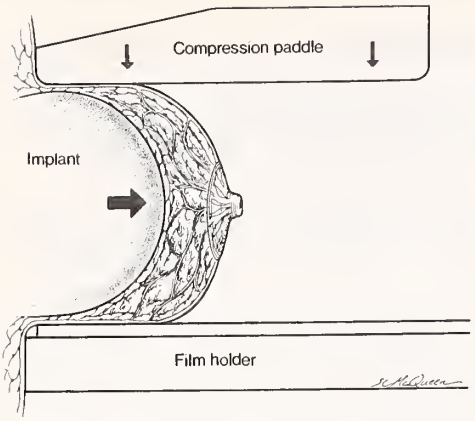


Figure 1. Diagram showing effect of standard mammographic compression being applied to the entire breast and prosthesis. The implant bulges forward compressing the anterior parenchyma behind the areola. In addition, peripheral areas of parenchyma are compressed onto the implant and will not be visible on the mammogram.

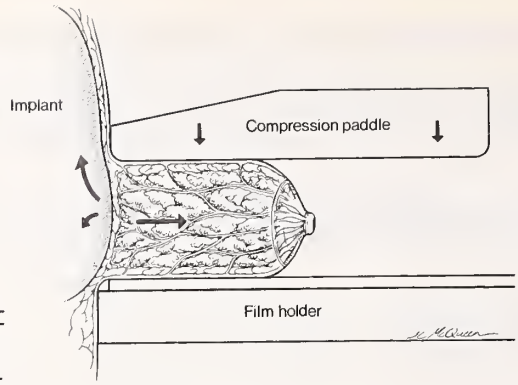


Figure 2. Modified view obtained by pushing the prosthesis posteriorly and applying compression only to the parenchyma anterior to the implant. This greatly improves mammographic detail in the tissue that can be compressed. Some parenchyma, however, will be excluded from view.

diameter for reliable differentiation. Ultrasound is not useful in distinguishing benign solid lesions from malignant ones.

Computed tomography (CT) and magnetic resonance imaging (MRI) may be useful in evaluating selected cases but are not useful for routine breast cancer screening.[9,10] These axial tomographic techniques can show the relationships of prosthesis, breast tissue and thorax without the limitations imposed by the compression needed in mammography. Thus, CT or MRI are particularly useful for imaging the posterior portion of the prosthesis or parenchyma that is persistently obscured by the implant.

Non-palpable lesions detected by mammography can be localized for biopsy using radiographic and occasionally ultrasonic guidance.[11] Nevertheless, puncture of the prosthesis is a potential complication that should be understood by the patient and referring surgeon.

Benign Conditions Affecting the Augmented Breast

Patients who have had augmentation mammoplasty can develop non-malignant disorders of the breast or complications related to the implantation which present as diagnostic problems. Mammography and other imaging studies frequently narrow the differential diagnosis or indicate the specific etiology. Complications of augmentation include hematoma, seroma, displacement or herniation of the prosthesis, leakage or rupture of the prosthesis, fibrous capsule formation and infection.[9,10,12-16]

In some augmented patients, displacement or herniation of the prosthesis may produce a palpable mass (figure 5).

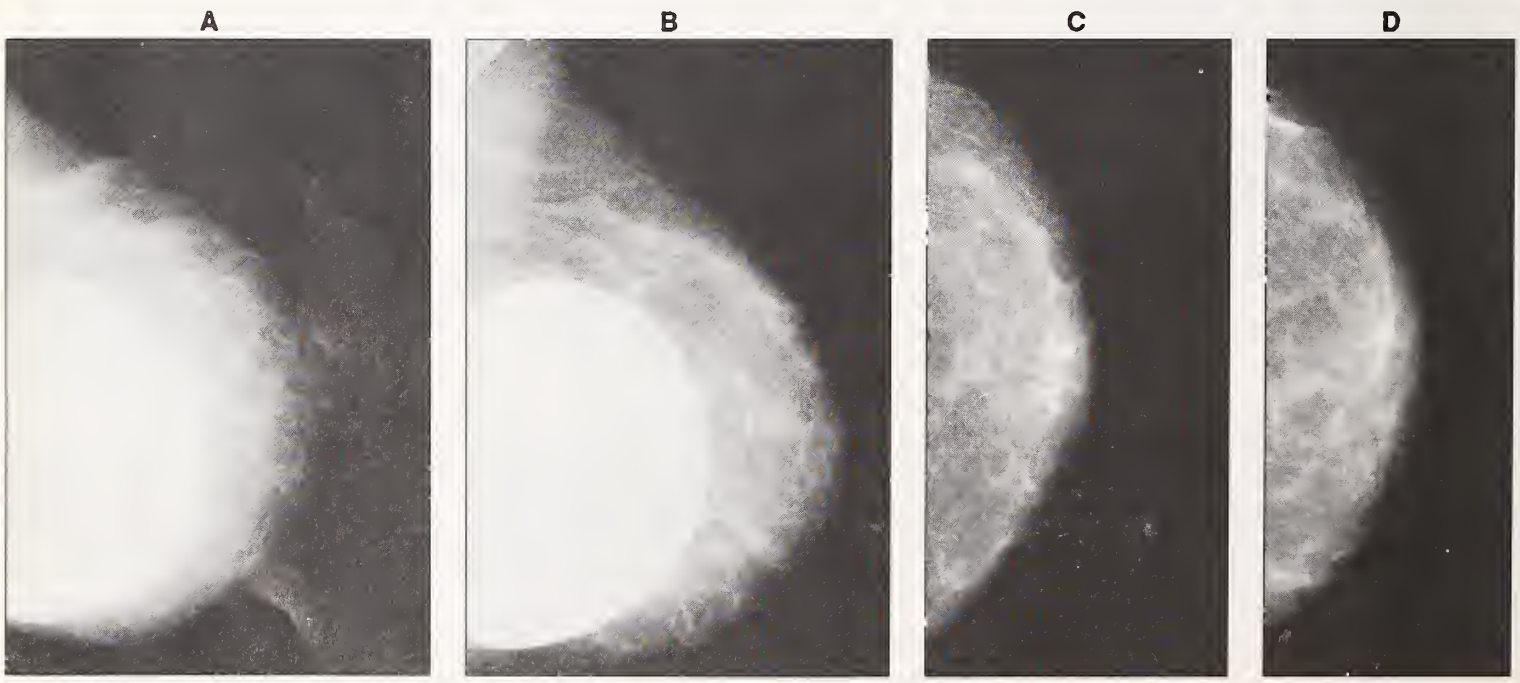


Figure 3. Standard craniocaudal view (A) and lateral view (B) of left breast in a 40-year-old woman with augmentation mammoplasty. Compression is applied to breast and prosthesis. Parenchyma anterior to implant is compressed and detail is obscured in the subareolar regions. Modified craniocaudal view (C) and lateral view (D) obtained by pushing the prosthesis against the chest wall and compressing the parenchyma. Parenchymal detail is much better seen.

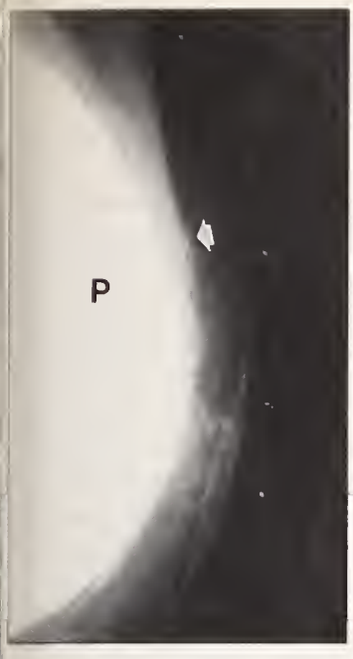


Figure 4. Left lateral mammogram from a patient with subpectoral implant. The pectoralis muscle (arrow) overlies the prostheses (P).



Figure 5. Left lateral mammogram from a patient with a palpable abnormality in the superior aspect of the breast. Palpable abnormality was correlated with the focal herniation (arrow) along the superior margin of the implant.



Figure 6. Right lateral mammogram in a patient with prior rupture of the implant. Most of leakage was confined and appears as a herniation (large arrow); however, some of leakage migrated to the axilla (small arrow).

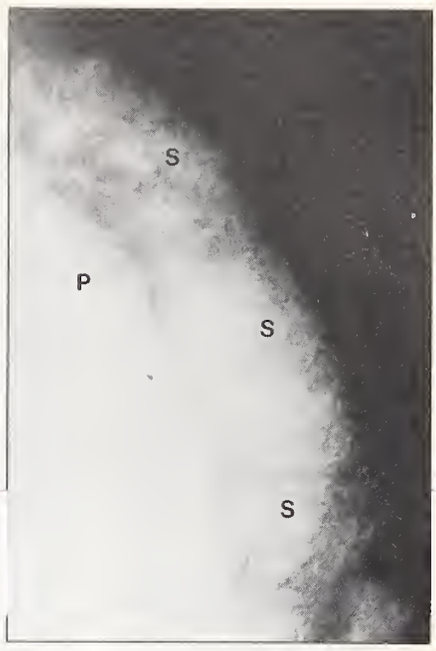


Figure 7. Focal magnified lateral mammogram from a patient with history of implant rupture. The ruptured prosthesis was removed four years prior to this mammogram and replaced with the one seen here (P). Multiple droplets of silicone (S) from the previously ruptured prosthesis are distributed throughout the breast. Early detection of breast cancer would be extremely difficult in this setting.

Mammography is usually helpful in these cases,[13] although CT or MRI may be needed if the abnormality is far posterior.

Leakage from or rupture of a silicone-filled prosthesis results in droplets of free silicone in the breast parenchyma and occasionally in peripheral tissues because of migration. The irritative effect of the silicone can produce a surrounding granulomatous reaction. In some patients the area of rupture or leakage may be confined by fibrous adhesions or capsule formation giving an appearance similar to herniation[16] (figure 6). In other patients the scarring and inflammation around the silicone may appear as stellate densities which may simulate malignant lesions or obscure underlying lesions. Such leakage can make the early detection of breast cancer very difficult (figure 7).

Peri-prosthetic infection makes mammography difficult to perform because inflammatory edema obscures parenchymal detail, and because the patient cannot tolerate the added discomfort of breast compression. Ultrasound, CT, or MRI may be satisfactorily performed in such patients. Any of these modalities would give useful information about the prosthesis and possible abscess formation.

Calcifications and nodularity associated with fibrous capsule formation are commonly seen on mammography. These are usually of no clinical significance, but occasionally the capsular nodules present as palpable masses or appear mammographically as a suspicious developing density (figure 8). Focal compression views of the questionable area may show that the nodule is a part of the capsule. In such cases, the nodule should be assessed with follow-up mammograms to determine that it represents a stable scar rather than a developing mass. Firm fibrous capsules may interfere significantly with compression of the breast during mammography by preventing the posterior displacement of the prosthesis required for detailed images of the anterior parenchyma.

Detection of Breast Cancer in the Augmented Breast

The value of mammography in detecting early breast cancer in asymptomatic women has been clearly established in multiple large studies.[1] In response to this data, several different professional organizations prepared guidelines stating who should receive mammograms and how often they should be done. In 1989, several organizations, including the American Cancer Society and the American College of Radiology, unified their guidelines and recommendations: age 40 to 49, annual or biennial mammography, depending on risk factors; age 50 and over, annual mammography.

There is some concern that women with prostheses may not benefit as much as other women from screening mammography because the prostheses might obscure an early cancer.[3] Silverstein et al. reported on 10 patients with implants

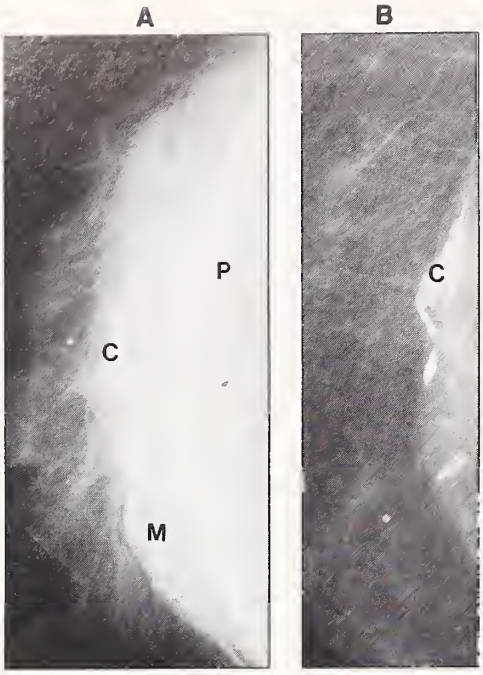


Figure 8. Right lateral mammogram (A) in a patient with a subpectoral implant. Focal compression image (B) demonstrates coarse dystrophic calcification (C) that has formed in muscle (M) adjacent to the prosthesis (P).

who developed cancer six months to 15 years after augmentation.[17] All patients presented with a palpable mass; none had occult lesions. Pre-biopsy mammograms were available in 15 of the 20 cases. The lesions were seen mammographically in 10 patients but not seen in five patients. All 10 cancers were invasive and 13 patients had positive lymph nodes. Because of the advanced state of these tumors at presentation, Silverstein et al. concluded that early detection of breast cancer was more difficult in the augmented patient. Specifically, these researchers suggested that mammography is probably less sensitive in the augmented patient than in other women.

More recently, Dershaw and Chaglassian reviewed a series of 59 mammograms in women with augmentation.[18] Of three malignancies in this group, two presented as palpable masses and one was an occult lesion seen only on mammography. Mitnick et al. reviewed mammograms on 85 women with implants.[19] Two occult intraductal carcinomas were detected by mammography. These latter two studies indicate that occult malignancies can be detected by mammography in women with prostheses, but all of the investigators agree that early detection of breast cancer may be compromised by the presence of implants.

The Society of Breast Imaging has considered this issue and formulated the following policy statement:[20]

> Mammography is the only reliable screening modality with the proven ability to detect nonpalpable breast carcinoma. Regular mammograms, according to accepted guidelines, should be encouraged for all women with or without augmentation implants.
>
> The augmented breast does present special imaging problems. The sensitivity of the examination will vary depending upon many factors including the experience and expertise of the mammographer and technologist, surgical techniques such as the placement of an implant in relation to the pectoral muscle, the characteristics of the implant and its relationship to native breast tissue.
>
> Radiologists and technologists should be familiar with the appropriate modified positioning techniques to achieve optimal compression of maximal amounts of breast tissue free of the implant. However even with modified techniques and additional views, the amount of breast tissue visualized will, to various degrees, be limited by the implant.

The American College of Radiology Committee on Breast Imaging in December, 1988, issued a consensus document stating that, "although there are no controlled trials demonstrating reduced effectiveness of early detection using mammography in this population, women contemplating augmentation should be informed that mammography may be more difficult to perform and may be less effective."[21] In addition to fully informing women of the possibly decreased effectiveness of mammography in patients with implants, it has been suggested that plastic surgeons advise against augmentation in women at high risk for developing breast cancer.[17]

Despite the concern over possible decreased sensitivity of mammography, it should be emphasized that there is general agreement that augmented patients over the age of 40 should receive annual mammograms. Physical examination of the breasts remains, of course, an essential adjunct to mammography in the early detection of breast cancer, and is probably of more importance in the augmented patient than in other women.

No large studies have investigated the value of preoperative mammograms in candidates for augmentation. Data from two studies suggest that the incidence of breast cancer in these patients at the time of surgery is 0.3% to 1.5%.[22,23] It is wise to obtain preoperative mammograms in prospective augmentation patients 30 years of age and older.

Summary

Mammography is invaluable for evaluating the breast parenchyma, and this is equally true for patients who have had breast augmentation. Early detection of breast cancer is the major indication, and mammography is the single best test for this task. Although the sensitivity of mammography may be lower in patients with augmentation, routine screening should be carried out in these patients according to standard guidelines. Physical examination of the breast continues to be an important complementary procedure.

Mammography is also important in the diagnostic evaluation of symptomatic women. Other imaging techniques such as ultrasound, computed tomography, and magnetic resonance imaging are often necessary as adjunctive studies in patients with prostheses. ❑

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Rural Outreach Breast Cancer Detection Program

A Demographic Report

S.M. Rakfal, M.D., J.E. Gaiser, Ph.D., and C.W. Scarantino, M.D., Ph.D.

Breast cancer will be diagnosed in an estimated 175,000 American women in 1991, and an estimated 44,800 women will die of breast cancer, which represents the second leading cause of cancer deaths among women in the United States.[1] The Breast Cancer Detection Demonstration Project (BCDDP), mounted by the National Cancer Institute (NCI) and the American Cancer Society (ACS) in the 1970s, showed higher survival rates for invasive cancers than did the NCI Surveillance, Epidemiology and End Results (SEER) program from 1977 to 1982.[2] In addition, the BCDDP has demonstrated the value of mammography in the early detection of breast cancer for women above and below the age of 50. Mammography alone accounted for 40% of the cancers detected, while 10% were detected solely by clinical breast exam. Survival benefit was strongly suggested for women age 40 to 49 as well as those over 50 years of age in this nonrandomized trial. In 1986, the American Cancer Society announced that its Breast Cancer Detection Awareness Program would become a primary area of emphasis. Breast Cancer Detection was the theme of the Society's Residential and Educational Crusade in 1987 and 1988.[3]

From East Carolina University School of Medicine, Department of Radiation Oncology, Greenville 27858 (SMR, JEG) and Rex Cancer Center, Department of Radiation Oncology, Raleigh 27607 (CWS).

Between 1988 and 1990, The Department of Radiation Oncology and the Leo Jenkins Cancer Center at East Carolina University has conducted an Awareness of Breast Cancer Day (ABCD) in association with the local Pitt County Chapter of the American Cancer Society. The primary purpose of ABCD was to increase public awareness of the importance of early detection of breast cancer. The focus of the program was education and service to the community, therefore few statistics were gathered beyond the information necessary to ensure good medical care. This report reviews the demographic and historical trends over the three years of the program.

Methodology

The community was made aware of the Awareness of Breast Cancer Day program through advertisement in the newspapers, local television and radio stations, and information posted at various locations throughout Pitt County. Contacts were made in regional workplaces, churches and sororities. As advertised, the program day included a free breast examination, instruction on breast self examination (BSE), an explanation of mammograms, and biopsies if needed. In the first two years the program was held at the East Carolina University School of Medicine (ECU SOM) Radiation Oncology Center, and in the last year, at the ECU SOM Family Practice Center. Participants were asked to call the medical school to register for the program and received a specified time for their examination. This allowed planning for an even flow of participants through the examination and the education areas in a timely fashion.

On the day of the program, registration included questions about current medical supervision, the date of last mammogram, any prior BSE instruction and family history of breast cancer. Details of the family history, including patrilineal, matrilineal or degree of relation were not asked of participants. Registration was followed by the free breast examination conducted by volunteer physicians. These included medical, radiation, and surgical oncologists, family practitioners, and surgeons from both the medical school and the community. During the breast exam, participants were given instruction in BSE, and screening mammograms were recommended to the women for whom it was appropriate. Physicians were encouraged to utilize the guidelines of the ACS or the NCI when making a recommendation for mammography (table 1). A pathologist was available to provide fine needle aspiration of any suspicious masses. Instruction in BSE was then given by the ACS personnel and volunteer nurses. This was done using video and simulated breast models de-

Table 1
Guidelines For Screening Mammography

American Cancer Society, 1987[12]	
Baseline:	age 35—40
1—2 year:	age 40—49
Annually:	age 50 and over
National Cancer Institute, 1987[11]	
1—2 year:	age 40—49
Annually:	age 50 and over

signed for this purpose. Instruction on the technique and radiation safety of mammography was also available for participants. The mammograms were offered by the local radiology practice at a reduced rate for participants in this program. The mammography unit was fully accredited by the American College of Radiology. A radiologist was available during the program to answer questions about mammography. Medical center clerical support personnel and nurses volunteered their services on the day of the program to register participants and accompany each woman through the breast examination. American Cancer Society personnel and radiology support personnel assisted nurses in BSE and mammography education. Each year, approximately 12 physicians participated with nearly 30 nurses, educators and other support personnel to mount the program. Over 300 women have attended the ABCD program between 1988 and 1990. The program drew the largest number of women in the first year; poor weather necessitated a rescheduling in 1989. Participation increased again in 1990.

Table 2
Number of Participants by County and Year

County	1988	1989	1990
Beaufort	6	5	2
Bertie	9	4	3
Chowan	3	1	
Edgecomb	1	1	1
Gates			2
Greene	4	2	2
Lenoir	2	2	
Martin	8	12	8
Pitt	105	28	76
Washington	10		2
Other Counties and County Not Reported	9		2
Total	157	55	98

Results

A total of 310 women were screened over the three-year period. The number of participants by county and year of program are shown in table 2. While Pitt County residents provided the largest proportion of participants, women were willing to travel long distances for this breast cancer screening opportunity (figure 1). Most women had a source for regular medical care, and a copy of the mammogram report was sent to their physician of record. In 1988, only six of 157 (4%) women were documented as having no regular physician. In 1989, that number was one of 55 participants (2%), while in 1990, it was seven of 98 participants (7%).

Over the three years of the program, most participants (59% to 78%) learned about the program from the media, including newspaper, television, radio advertisements and flyers at work and other locations. Family and friends accounted for 14% to 36% of referral sources between 1988 and 1990. It was determined that five women in 1990 had attended in 1989 and two women in 1989 had participated in 1988.

Figure 2 (next page) documents the age characteristics of participants for each year of the program. The ABCD program successfully targeted the appropriate population for screening, with the majority of participants each year being between 35 and 74 years of age. It should be noted that the mean age was 45 or older in each year.

The vast majority (76% to 86%) of women attending the program reported having had prior instruction in BSE. With nearly all participants responding, 43%,

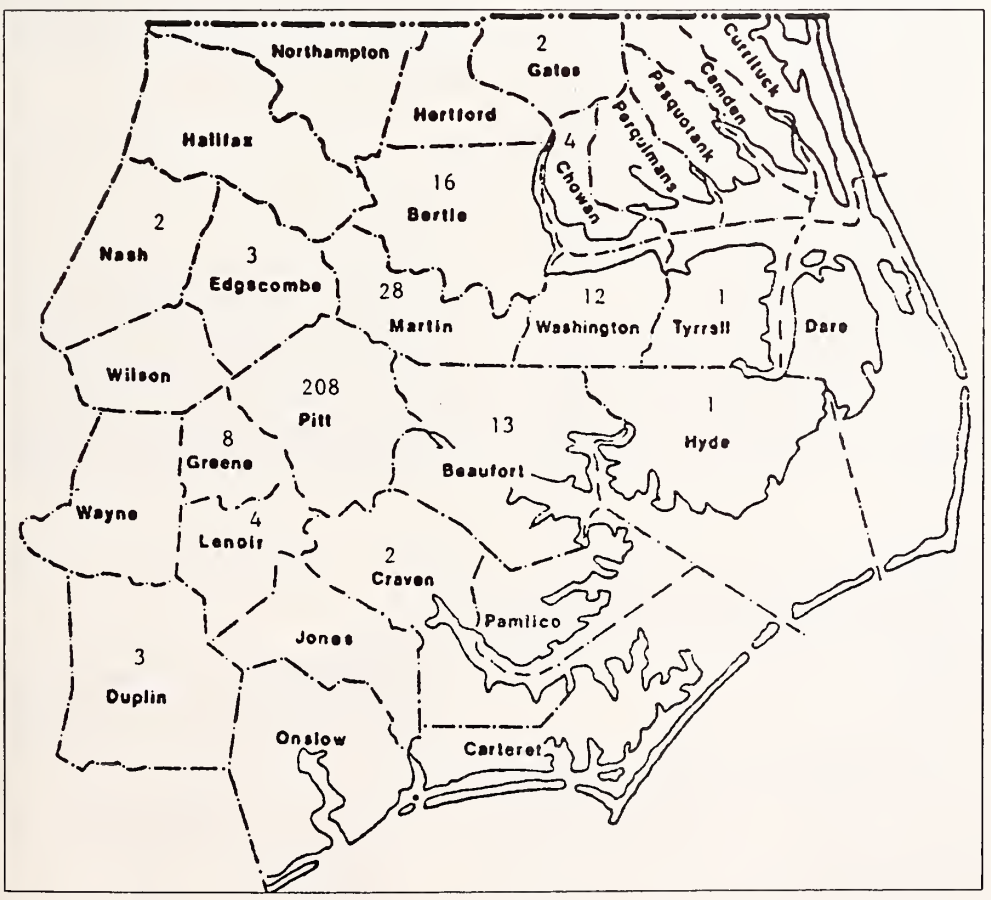


Figure 1. Total number of participants by county.

Table 3
Participants by Age Category Who Met ACS Guidelines for Mammography

	Baseline (35-40 yrs)	Every Other Year (41-49 yrs)	Every Year (>50 yrs)
1988	27/35 (77%)	15/20 (75%)	74/74 (100%)
1989	6/8 (75%)	12/13 (92%)	30/32 (94%)
1990	12/18 (67%)	8/11 (73%)	55/57 (96%)

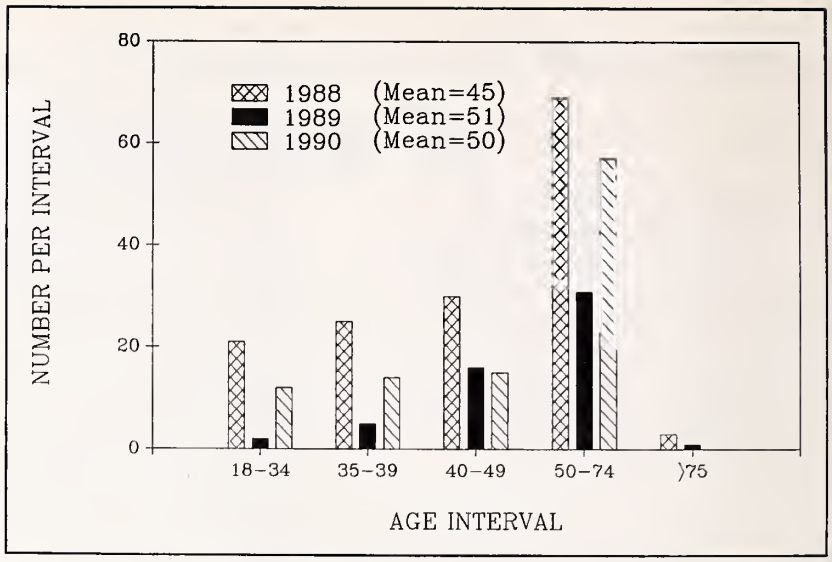


Figure 2. Age distribution by year.

65% and 52% yearly from 1988 to 1990 indicated a history of a prior mammogram. Each year, more than 80% of the participants were referred for a screening or, as needed, a diagnostic mammogram. Results of the inquiry regarding any family history of breast cancer revealed a positive response in 21% to 24% during each of the three years.

Because of the great number of women who reported having medical supervision, we were interested in discerning if we had reached a population who were already well served by breast cancer screening. By examining the date of last mammogram relative to the ACS guidelines for screening mammography, we were able to determine the proportion of participants in need of screening intervention that year. As seen in table 3, most participants were due for a screening intervention in each year of the program. Those who did not meet the guidelines had already had a mammogram within the period of time designated for their age category. In both categories over 40 years of age, nearly all the women were appropriate for intervention in each year of the program. This was less apparent for women in the 35- to 40-year age category. Despite publicity efforts aimed specifically at reaching the medically underserved population of this region, table 4 shows relatively low percentages of participants in each age category who met the guidelines for screening mammography, but had not ever had one. Considering the group of women who should be in regular screening care of breast cancer, those over 40 years of age, table 5 shows that overall, the program incorporated approximately 25% of women who apparently did not have regular screening care available to them.

Outcome of the screening reveals one breast cancer diagnosed in 1988 (1/157, 0.6%) and one in 1989 (1/55, 2%). There were five suspicious lumps detected by examination in 1988, four in 1989, and two in 1990. One breast cancer was diagnosed by biopsy and the other by fine needle aspiration. The cancers identified were 2 cm and 4 cm in diameter, respectively. The women who had cancers detected were 41 and 40 years of age, respectively; both reported prior instruction in BSE, but neither reported having had a prior mammogram.

While approximately one-fifth of our population each year could be termed "at risk" by virtue of a positive family history of breast cancer, there was no significant difference in their prior mammogram history or BSE instruction experience compared to those women who did not report a family history of breast cancer. For each of the years, data on prior BSE instruction shows that women of all age categories had received prior instruction. Specifically, in the over-50 age group, 93% of women with a positive family history and 85% of women with no family history of breast cancer had received instruction in BSE.

Discussion

Breast cancer screening projects have been mounted in many communities and serve to increase public awareness of this disease.[3] Support for such voluntary screening programs is broad and breast cancer mortality has clearly been reduced

Table 4
Participants With No Prior Mammogram Who Met ACS Guidelines for Mammography

	Baseline (35-40 yrs)	Every Other Year (41-49 yrs)	Every Year (>50 yrs)
1988	27 (17%)	13 (8%)	29 (8%)
1989	6 (1%)	5 (9%)	6 (11%)
1990	11 (11%)	5 (5%)	20 (21%)

Table 5
Participants Over 40 Years of Age With No Prior Mammogram

	Percent of all Participants
1988	27%
1898	20%
1990	26%

in some studies as a result of such screening.[5] While it is generally accepted that risk factors alone will not identify the majority of women likely to develop a breast cancer,[6,7] some have looked at risk-based breast cancer screening as a result of issues such as cost-effectiveness and risk.[8] There continues to be some controversy regarding the use of mammography in women under the age of 50.[9] However, for women over 50, the NCI Breast Cancer Screening consortium reported general under-utilization of all screening modalities for all sociodemographic groups.[4]

Results from this report cannot be generalized to describe the region. Clearly self-selection for this one-day screening program reflects some interest or motivation on the part of the participants. This may account for our large proportion of women (76% to 86%) reporting prior BSE instruction. While we did not inquire about BSE practice, information from the Canadian National Breast Screening Study would indicate that most women who participate in a screening program will upgrade their BSE skills with repeated episodes of BSE instruction.[10] The same group reported little influence from variables such as age (comparing fifth and sixth decades), ethnic origin, smoking history and educational status on BSE competence. They did find that women with a positive family history of breast cancer had higher performance scores in BSE. While instruction and performance cannot be directly compared, it is interesting to note that 89% of our participants over 40 years of age with a positive family history of breast cancer had instruction in BSE compared to 83% in the same age range with no family history. As long as most cancers continue to be found by women themselves and repeated BSE instruction can improve these skills, physicians should incorporate BSE instruction in interactions with female patients. BSE may represent a cost effective modality for interval cancer detection, or screening, for those who do not participate in regular medical care.

In comparison to the results of the Colorado Collaborative Screening Mammography Project where almost 60% of the participating women had never had a mammogram,[3] our rate was 50% without a prior mammogram. Recognizing that over 90% of our participants identified a source of medical supervision and that 10% to 20% of participants over age 40 had not had a prior mammogram, the majority of our participants were reasonably well served by their medical care. There was clearly not a large response from our efforts to reach the medically underserved. One option to make screening care more accessible would be a mobile screening team to perform clinical breast examination and instruction of BSE techniques in the extended rural community. The issues of publicity, accessibility and response of target populations to screening efforts require further study if screening is to be successful in all sociodemographic groups.

While this program did not have the information to examine education and income trends in the data, we recognize that these factors may affect results of any kind of screening program. The NCI Breast Cancer Screening Consortium has documented, in population based surveys of women aged 50 to 74, with over 90% having a source of medical care, that 46% to 76% of non-Hispanic white women had clinical breast examinations within the previous year, but only 25% to 41% had mammograms in that same time frame.[4] Those studies also reported that women with less education and lower income had less breast cancer screening. The authors point out that compliance with breast cancer screening could improve if women understood the need for such screening, and that physicians can have an important role in screening by educating their patients.

In summary, two breast cancers were identified from a population of 310 participants over three years in a voluntary community screening project. One lesion was 2 cm and the other was 4 cm in diameter and both lesions were initially noted by clinical breast examination. Although the program goals of service to, and education for, the community were clearly met for those who chose to participate in the Awareness of Breast Cancer Day project, we recognize that a relatively small proportion of the regional population availed themselves of this opportunity. Approximately half of the women who participated in the program were not delinquent in screening measures and more than three fourths had been instructed in breast self examination. While the challenge of reaching a targeted population is an important component of breast cancer screening effectiveness, it is the individual physician who has the opportunity to educate patients and recommend screening measures on a regular basis.

Conclusions

The ABCD program met its goals of service and education for the extended community. Approximately 25% of the participants may reflect the medically underserved with regard to mammography. While this screening program will not alter survival statistics for the region, the heightened awareness of breast cancer screening for physicians and the community can ultimately bring benefit to those women who choose to take responsibility for their health and are given the information and opportunity to do so. ❑

Acknowledgments

The authors gratefully acknowledge the editorial assistance of C. De Angelis, M.D., and E. Halperin, M.D., as well as the informational assistance of B. Cratch.

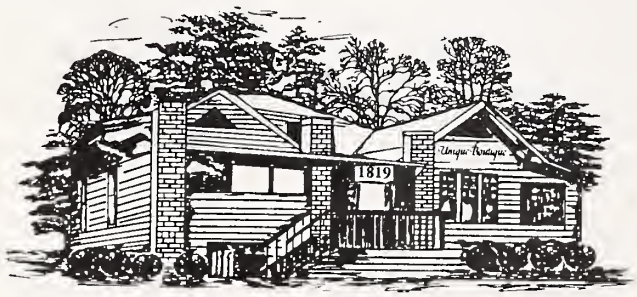
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See revised Dosage and Administration section in brief summary of Prescribing Information on the following page.

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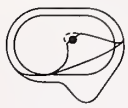
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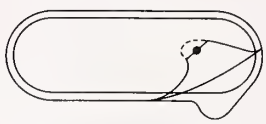
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Revised Dosage Information

BRIEF SUMMARY (FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE INSERT)

INDICATIONS AND USAGE
This drug product has been conditionally approved by the FDA for the prevention of angina pectoris due to coronary artery disease. Tolerance to the antianginal effects of nitrates (measured by exercise stress testing) has been shown to be a major factor limiting efficacy when transdermal nitrates are used continuously for longer than 12 hours each day. The development of tolerance can be altered (prevented or attenuated) by use of a noncontinuous (intermittent) dosing schedule with a nitrate-free interval of 10-12 hours.

Controlled clinical trial data suggest that the intermittent use of nitrates is associated with decreased exercise tolerance, in comparison to placebo, during the last part of the nitrate-free interval; the clinical relevance of this observation is unknown, but the possibility of increased frequency or severity of angina during the nitrate-free interval should be considered. Further investigations of the tolerance phenomenon and best regimen are ongoing. A final evaluation of the effectiveness of the product will be announced by the FDA.

CONTRAINDICATIONS
Allergic reactions to organic nitrates are extremely rare, but they do occur. Nitroglycerin is contraindicated in patients who are allergic to it. Allergy to the adhesives used in nitroglycerin patches has also been reported, and it similarly constitutes a contraindication to the use of this product.

WARNINGS
The benefits of transdermal nitroglycerin in patients with acute myocardial infarction or congestive heart failure have not been established. If one elects to use nitroglycerin in these conditions, careful clinical or hemodynamic monitoring must be used to avoid the hazards of hypotension and tachycardia.

A cardioverter/defibrillator should not be discharged through a paddle electrode that overlies a Transderm-Nitro patch. The arcing that may be seen in this situation is harmless in itself, but it may be associated with local current concentration that can cause damage to the paddles and burns to the patient.

PRECAUTIONS
General
Severe hypotension, particularly with upright posture, may occur with even small doses of nitroglycerin. This drug should therefore be used with caution in patients who may be volume depleted or who, for whatever reason, are already hypotensive. Hypotension induced by nitroglycerin may be accompanied by paradoxical bradycardia and increased angina pectoris.

Nitrate therapy may aggravate the angina caused by hypertrophic cardiomyopathy.

As tolerance to other forms of nitroglycerin develops, the effect of sublingual nitroglycerin on exercise tolerance, although still observable, is somewhat blunted.

In industrial workers who have had long-term exposure to unknown (presumably high) doses of organic nitrates, tolerance clearly occurs. Chest pain, acute myocardial infarction, and even sudden death have occurred during temporary withdrawal of nitrates from these workers, demonstrating the existence of true physical dependence.

Several clinical trials in patients with angina pectoris have evaluated nitroglycerin regimens which incorporated a 10-12 hour nitrate-free interval. In some of these trials, an increase in the frequency of anginal attacks during the nitrate-free interval was observed in a small number of patients. In one trial, patients demonstrated decreased exercise tolerance at the end of the nitrate-free interval. Hemodynamic rebound has been observed only rarely; on the other hand, few studies were so designed that rebound, if it had occurred, would have been detected. The importance of these observations to the routine, clinical use of transdermal nitroglycerin is unknown.

Information for Patients
Daily headaches sometimes accompany treatment with nitroglycerin. In patients who get these headaches, the headaches may be a marker of the activity of the drug. Patients should resist the temptation to avoid headaches by altering the schedule of their treatment with nitroglycerin, since loss of headache may be associated with simultaneous loss of antianginal efficacy.

Treatment with nitroglycerin may be associated with lightheadedness on standing, especially just after rising from a recumbent or seated position. This effect may be more frequent in patients who have also consumed alcohol.

After normal use, there is enough residual nitroglycerin in discarded patches that they are a potential hazard to children and pets.

A patient leaflet is supplied with the systems.

Drug Interactions
The vasodilating effects of nitroglycerin may be additive with those of other vasodilators. Alcohol, in particular, has been found to exhibit additive effects of this variety.

Marked symptomatic orthostatic hypotension has been reported when calcium channel blockers and organic nitrates were used in combination. Dose adjustments of either class of agents may be necessary.

Carcinogenesis, Mutagenesis, Impairment of Fertility
No long-term animal studies have examined the carcinogenic or mutagenic potential of nitroglycerin. Nitroglycerin's effect upon reproductive capacity is similarly unknown.

Pregnancy Category C
Animal reproduction studies have not been conducted with nitroglycerin. It is also not known whether nitroglycerin can cause fetal harm when administered to a pregnant woman or whether it can affect reproductive capacity. Nitroglycerin should be given to a pregnant woman only if clearly needed.

Nursing Mothers
It is not known whether nitroglycerin is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when nitroglycerin is administered to a nursing woman.

Pediatric Use
Safety and effectiveness in children have not been established.

ADVERSE REACTIONS
Adverse reactions to nitroglycerin are generally dose-related, and almost all of these reactions are the result of nitroglycerin's activity as a vasodilator. Headache, which may be severe, is the most commonly reported side effect. Headache may be recurrent with each daily dose, especially at higher doses. Transient episodes of lightheadedness, occasionally related to blood pressure changes, may also occur. Hypotension occurs infrequently, but in some patients it may be severe enough to warrant discontinuation of therapy. Syncope, crescendo angina, and rebound hypertension have been reported but are uncommon.

Extremely rarely, ordinary doses of organic nitrates have caused methemoglobinemia in normal-seeming patients. Methemoglobinemia is so infrequent at these doses that further discussion of its diagnosis and treatment is deferred (see Overdosage).

Application-site irritation may occur but is rarely severe.

In two placebo-controlled trials of intermittent therapy with nitroglycerin patches at 0.2 to 0.8 mg/hr, the most frequent adverse reactions among 307 subjects were as follows:

	Placebo	Patch
Headache	18%	63%
Lightheadedness	4%	6%
Hypotension, and/or syncope	0%	4%
Increased angina	2%	2%

OVERDOSAGE
Hemodynamic Effects
The ill effects of nitroglycerin overdose are generally the result of nitroglycerin's capacity to induce vasodilatation, venous pooling, reduced cardiac output, and hypotension. These hemodynamic changes may have protean manifestations, including increased intracranial pressure, with any or all of persistent throbbing headache, confusion, and moderate fever; vertigo; palpitations; visual disturbances; nausea and vomiting (possibly with colic and even bloody diarrhea); syncope (especially in the upright posture); air hunger and dyspnea, later followed by reduced ventilatory effort; diaphoresis, with the skin either flushed or cold and clammy; heart block and bradycardia; paralysis; coma; seizures; and death.

Laboratory determinations of serum levels of nitroglycerin and its metabolites are not widely available, and such determinations have, in any event, no established role in the management of nitroglycerin overdose.

No data are available to suggest physiological maneuvers (e.g., maneuvers to change the pH of the urine) that might accelerate elimination of nitroglycerin and its active metabolites. Similarly, it is not known which, if any, of these substances can usefully be removed from the body by hemodialysis.

No specific antagonist to the vasodilator effects of nitroglycerin is known, and no intervention has been subject to controlled study as a therapy of nitroglycerin overdose. Because the hypotension associated with nitroglycerin overdose is the result of venodilatation and arterial hypovolemia, prudent therapy in this situation should be directed toward an increase in central fluid volume. Passive elevation of the patient's legs may be sufficient, but intravenous infusion of normal saline or similar fluid may also be necessary.

The use of epinephrine or other arterial vasoconstrictors in this setting is likely to do more harm than good.

In patients with renal disease or congestive heart failure, therapy resulting in central volume expansion is not without hazard. Treatment of nitroglycerin overdose in these patients may be subtle and difficult, and invasive monitoring may be required.

Methemoglobinemia
Nitrate ions liberated during metabolism of nitroglycerin can oxidize hemoglobin into methemoglobin. Even in patients totally without cytochrome b_5 reductase activity, however, and even assuming that the nitrate moieties of nitroglycerin are quantitatively applied to oxidation of hemoglobin, about 1 mg/kg of nitroglycerin should be required before any of these patients manifests clinically significant ($\geq$ 10%) methemoglobinemia. In patients with normal reductase function, significant production of methemoglobin should require even larger doses of nitroglycerin. In one study in which 36 patients received 2-4 weeks of continuous nitroglycerin therapy at 3.1 to 4.4 mg/hr, the average methemoglobin level measured was 0.2%; this was comparable to that observed in parallel patients who received placebo.

Notwithstanding these observations, there are case reports of significant methemoglobinemia in association with moderate overdoses of organic nitrates. None of the affected patients had been thought to be unusually susceptible.

Methemoglobin levels are available from most clinical laboratories. The diagnosis should be suspected in patients who exhibit signs of impaired oxygen delivery despite adequate cardiac output and adequate arterial pO_2. Classically, methemoglobinemic blood is described as chocolate brown, without color change on exposure to air.

When methemoglobinemia is diagnosed, the treatment of choice is methylene blue, 1-2 mg/kg intravenously.

DOSAGE AND ADMINISTRATION
The suggested starting dose is between 0.2 mg/hr*, and 0.4 mg/hr*. Doses between 0.4 mg/hr* and 0.8 mg/hr* have shown continued effectiveness for 10-12 hours daily for at least one month (the longest period studied) of intermittent administration. Although the minimum nitrate-free interval has not been defined, data show that a nitrate-free interval of 10-12 hours is sufficient (see INDICATIONS AND USAGE). Thus, an appropriate dosing schedule for nitroglycerin patches would include a daily patch-on period of 12-14 hours and a daily patch-off period of 10-12 hours.

Although some well-controlled clinical trials using exercise tolerance testing have shown maintenance of effectiveness when patches are worn continuously, the large majority of such controlled trials have shown the development of tolerance (i.e., complete loss of effect) within the first 24 hours after therapy was initiated. Dose adjustment, even to levels much higher than generally used, did not restore efficacy.

PATIENT INSTRUCTIONS FOR APPLICATION OF SYSTEM
A patient leaflet is supplied with each carton.

HOW SUPPLIED

Transderm-Nitro System*	Total Nitroglycerin in System	System Size	Carton Size
0.1 mg/hr	12.5 mg	5 cm²	30 Systems...NDC 57267-902-26
			**30 Systems...NDC 57267-902-42
			**100 Systems...NDC 57267-902-30
0.2 mg/hr	25 mg	10 cm²	30 Systems...NDC 57267-905-26
			**30 Systems...NDC 57267-905-42
			**100 Systems...NDC 57267-905-30
0.4 mg/hr	50 mg	20 cm²	30 Systems...NDC 57267-910-26
			**30 Systems...NDC 57267-910-42
			**100 Systems...NDC 57267-910-30
0.6 mg/hr	75 mg	30 cm²	30 Systems...NDC 57267-915-26
			**30 Systems...NDC 57267-915-42
			**100 Systems...NDC 57267-915-30

**Institutional Pack

*Rated release in vivo. Release rates were formerly described in terms of drug delivered per 24 hours. In these terms, the supplied Transderm-Nitro systems would be rated at 2.5 mg/24 hr (0.1 mg/hr), 5 mg/24 hr (0.2 mg/hr), 10 mg/24 hr (0.4 mg/hr), and 15 mg/24 hr (0.6 mg/hr).

Do not store above 86°F (30°C).

Summit Pharmaceuticals

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C89-46 (Rev. 10/89)

References:
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Osteoporosis—A Forgotten Disease

Sam J. Morayati, M.D.

Osteoporosis is one of the most common metabolic bone disorders. While most of us recognize the seriousness and the mortality of coronary artery diseases, unfortunately few of us are aware of the full impact of osteoporosis in terms of morbidity and financial and social expense. However, anticipating risk factors and starting treatment early is an effective way to minimize the negative effects of osteoporosis. Otherwise, the consequences can be devastating. Each year this condition can lead to approximately 1.3 million fractures. Of these, 250,000 are hip fractures, 250,000 wrist fractures, and 500,000 vertebral fractures.[1]

One-third of American women over the age of 65 will eventually have spinal fractures; 50% of them will need some help with daily living activities and 15% to 25% will need to enter long-term care facilities shortly after fracture. Furthermore, 12% to 20% of hip fracture victims die shortly after fracture, usually from complications such as pneumonia and pulmonary emboli. In 1988 it was estimated that the medical, social, and nursing home cost of this disorder was $7 to $10 billion per year. These figures are expected to double by the year 2020, reflecting a 12% increase in the United States' population of individuals over the age of 65 from the 1988 statistics.[2]

While the disorder affects women four times as often as men, 20% of individuals who suffer from osteoporosis are usually men who develop the disease at a later age. Because any substantial reduction in these costs depends on preventing fractures rather than improving treatment of patients with fractures, virtually every assessment of this problem has concluded that the impact of osteoporosis is sufficient to justify prophylactic measures and programs.

From P.O. Box 14971, Greensboro 27415. Dr. Marayati is a consultant to Bertrand Diagnostic Imaging and Breast Center.

Clinical Evaluation

The definition of osteoporosis is a decrease in total bone mass. Two categories of osteoporosis have been identified: primary and secondary. **Primary osteoporosis** is by far the most common form of the condition and includes postmenopausal osteoporosis (Type 1); involutional (Type 2); and juvenile idiopathic and rare congenital types. **Secondary osteoporosis** is usually a manifestation of numerous conditions which include hematological malignancies (myeloma, lymphoma, leukemia), renal insufficiency, endocrinopathies (hyperparathyroidism, hyperthyroidism, Cushing's Syndrome, Type 1 diabetes mellitus), drugs (Heparin, Methotrexate, Glucocorticoid, alcohol, thyroid, anti-convulsant), gastrointestinal malabsorptive and chronic liver disease, immobilization, and other rare causes such as rheumatoid arthritis and mastocytosis.

Assessment of an individual suspected of having osteoporosis should start with a review of the risk factors. These include cigarette smoking, drug use, family history, and low calcium, high protein, and high caffeine dietary intake. Physical examination of an individual suspected of having the disorder should include obtaining measurements of the height and weight, dental examination, looking for evidence of any of the secondary causes, and estimating degree of kyphosis and site of tenderness.

Laboratory and special studies should include CBC, urinalysis, biochemistry panel, protein electrophoresis, thyroid studies, x-ray of the thoracolumbar spines, and dual or single photon absorbometry studies. Other special studies to exclude secondary causes of osteoporosis, such as 24-hour urinary calcium, parathyroid hormone, and bone biopsy, might be necessary. Single photon bone density studies and dual photon and x-ray absorbometries are considered standard methods for screening and estimating the degree of bone mineralization as a baseline and following a therapeutic regimen.

Management

Ideally, preventative treatment should begin before skeletal maturation to minimize risk factors. But in menopausal women, our goals are to prevent further bone loss and possible fracture. A therapeutic program regimen, therefore, should start with an analysis of risk factors and alleviating as many of those conditions (i.e., habits, drugs) as possible.

Further steps in the management of osteoporosis include a three-part approach: dietary intake, exercise, and drug therapy. There should be a daily requirement for premenopausal and estrogen-treated women of 1,000 mg of calcium, and for those who are non-estrogen treated

and postmenopausal, 1500 mg of calcium is recommended.

Weight-bearing exercise programs should be started slowly and built up gradually. Such programs are walking, jogging, jumping rope, aerobic dancing, gymnastics, raquetball, etc.

When there are no contraindications to estrogen in postmenopausal women, estrogen has been determined to be a very effective measure in showing substantial reduction in hip and wrist fractures in women taking estrogen within five years of menopause. The usual effective dose is 0.625 mg of conjugated equine estrogen. In some cases calcitonin is indicated for postmenopausal osteoporosis patients taking adequate amounts of calcium and vitamin D. It has been shown in controlled studies that calcitonin prevents further loss of bone mass, and may increase bone mass and decrease patients' symptoms and pain and suffering. Several therapeutic regimens have been proposed over two years in a dose ranging between 50 and 100 units per day.

Future Trends

Several studies have been devoted to the use of other drugs in the treatment of osteoporosis. The most widely published and promising are diphosphinates (etidronate) and fluoride. Cyclic etidronate disodium therapy, which is available to treat Paget's disease of the bones, inhibits the formation and activity of osteoclast. Several studies have demonstrated the effectiveness in the treatment of osteoporosis. However, long-term trial studies are needed to establish its efficacy. Fluoride treatment has been shown to increase bone density; however, the debate still exists about its reverse action in increasing the incidence of nonvertebral bone fractures.

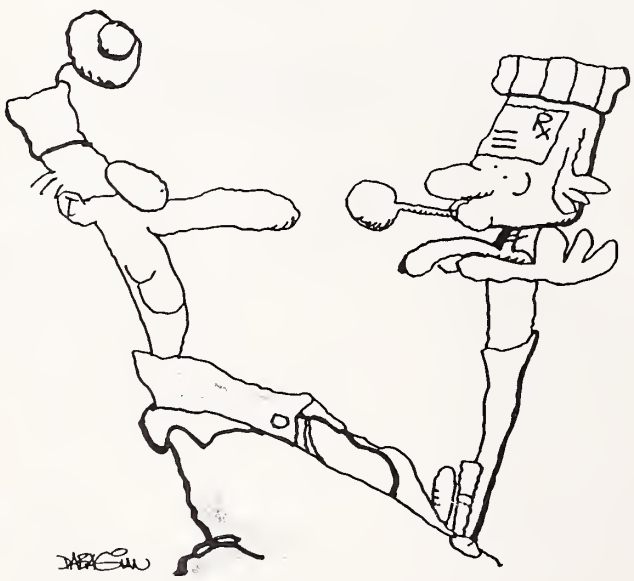
Summary

In summary, osteoporosis is a preventable tragedy. The tools to diagnose and treat this disease are readily available to all physicians. Our goal and maximum effort should be directed toward early screening and identification of those individuals at high risk for the development of osteoporosis pre- and peri-menopausal. Likewise, postmenopausal women should be routinely assessed for the possibility of developing this disorder. The cost savings in terms of medical dollars and patient pain and suffering cannot be overstated. Osteoporosis screening and management should be one of the main women's health issues of the 1990s. ❑

References

1 Melton LJ, Eddy DN, Johnston CC. Screening for osteoporosis. Annals of Int Med 1990;112:516-28.

2 Osteoporosis, Cause, Treatment, Prevention. US Department of Health and Human Services, May 1986.



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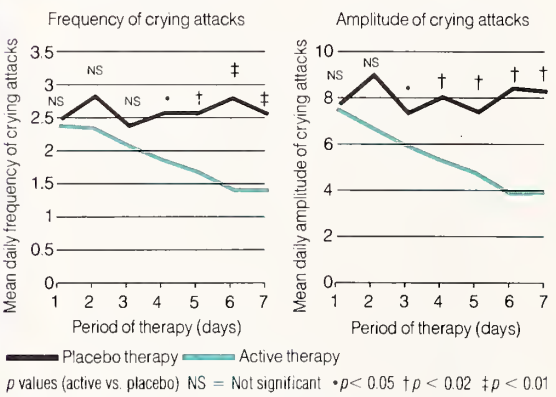
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1. Kanwaljit SS, Jasbir KS. Simethicone in the management of infant colic. *Practitioner.* 1988;232:508.

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Edward C. Halperin, M.D., Book Review Editor

***The Couple's Guide to Fertility*, by G.S. Berger, M. Goldstein and M. Fuerst. New York: Doubleday, 1989.**

Reviewed by Kenneth Faber, M.D., and Kevin Bachus, M.D., Department of Obstetrics and Gynecology, Division of Reproductive Endocrinology, Duke University Medical Center, Durham 27710.

The Couple's Guide to Fertility presents itself as a guide to infertile couples on the most recent advances in infertility. It succeeds in providing patients with a firm basis for understanding the multiple technologies currently available in this field. There can be little doubt as to the need for such a book, as an increasing number of patients are confronted with a seemingly endless list of therapies, many of which are highly technical, expensive and frequently controversial. Drs. Berger and Goldstein and Mr. Fuerst have taken care to provide enough background material that patients may reasonably approach their own care and discuss the various alternatives in a knowledgeable and prepared manner. Herein lies the true value of any medical book written for the general public. Thus, this book should be best used as a starting point for further discussion with the patient's own physician.

Although many chapters are well written, the chapter on the epidemiology of infertility and the factors contributing to today's increase in the number of infertile couples is particularly well done and should be interesting to patients. The discussion of the basic biology of conception and early pregnancy is also well written. The discussion of the more advanced treatments including IVF, GIFT and various advanced reproductive technologies provides the patient with a concise synopsis of some of the more technical aspects of infertility care.

The authors intermix patient testimonies within these chapters in an attempt to illustrate the frustrations involved with being an infertile patient. These vignettes personalize the book from a patient's perspective, yet they frequently contain unnecessary reference to the authors and their own clinic. They would be as effective for the patient if the authors were not cited.

The authors often present their bias concerning the importance of such controversial topics as the post coital test. This can be the source of patient misunderstanding when other physicians place less importance on these issues. Although a minor point, it would behoove the practicing physician to compare his or her own practice patterns in these controversial areas prior to recommending this book to their patients, in order to prevent potential misunderstanding by the patient.

The accomplishment of the book, however, is not to be taken lightly. To a major extent, the volume presents this group of patients with easily understood and yet detailed information. It is hoped that, through such information, patients may gain an understanding of their own processes and treatment options.

There is no substitute for communication between the physician and his or her patient; however, this book may facilitate that discussion. We have no difficulty in recommending this book to the infertile couple as appropriate background reading.

From the Division of Radiation Oncology, Box 3085, Duke University Medical Center, Durham 27710.

***By Whose Hand?* by J.E. Newell. Morehead City, NC: Campbell & Campbell, Inc., 1989.**

Reviewed by Connie Hall Meares, Hampton Court, Chapel Hill 27514.

Dr. Josephine E. Newell practiced family medicine in Bailey, North Carolina, for 24 years. She has been Peer Review Physician for the Social Security Disability Section of the Department of Human Resources. Also, since 1968 when she co-founded the Country Doctor Museum in Bailey, she has been involved in the finding and collecting of medical artifacts for the museum.

In 1987, along with a truckload of medical artifacts, she was given an old personal journal. The journal was not dated or signed. The writer mentioned one date—May 1—as the date of General Fitzhugh Lee's funeral, and in the back of the journal there was an envelope addressed to "Marie" at a Richmond address. Using these two bits of information, Dr. Newell managed with great effort and much help from various sources and people to piece together Marie's life up to her violent death the night of June 10, 1925, at Ocean Park, Virginia.

Dr. Newell has attempted to weave together the information she uncovered and actual entries from Marie's diary to

create a "factional" account of Marie's life and mysterious death. This is Dr. Newell's first book, and it is heavy on exposition with little dialogue or character interaction. Still, the excerpts from the journal are fascinating.

Marie suffered from debilitating ear and hearing problems for which she underwent several painful and unsuccessful operations and treatments. She experienced dizzy spells and constantly heard a loud roaring sound. She was equally unlucky in romance, and her journal entries are vivid and haunting as she details her life of longing and suffering. It is easy to see why Dr. Newell was captivated by Marie's tragic story and inspired to write this book. ❑

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Letters to the Editor

"Examination Without Interview"
To the Editor:

The article "Examination Without Interview," by Drs. Maxted, Blackley and Neelon in the July issue of the *Journal* (1991;52:307-10) is well received. As a former Physical Diagnosis preceptor I commend the authors for their study. I, too, deplore the devaluation of physical findings. I have shared the authors' experience of discovering diagnostic clues not noted in the hospital chart. The experiment of working backwards, examining patients prior to taking the history, is fascinating. In the past, when such a thought crossed my mind, I had considered it heretical to the accepted sequence of a workup, but its value has now been demonstrated. Indeed, performing the physical evaluation as the initial step puts the examiner in a challenging position; he must be meticulous in his search for findings without the benefit of historical clues.

One point: laboratory values do not consistently solidify a diagnosis. My own teachers in medical school used to say, "Use laboratory values to confirm your impression, but when those results fail to verify the result obtained from a careful history and examination, discard them." In 1991, in the light of highly accurate modern technology, I would alter that advice to urge the repetition of tests when there is a discrepancy.

I thank the authors for calling attention to the effective use of the examiner's eyes, ears and fingers during a bedside evaluation: accurate diagnoses can be made prior to extensive hematological and radiological investigative procedures. The clues generated from the clinical examination are valid and timely. A physical finding is like a rock, unequivocal and unassailable, a landmark which is not subject to technological errors.

E. Weissman, M.D., FACP
1308 Welcome Circle
Durham, 27705-5010

A thank-you to Dr. Stead
To the Editor:

Upon reading of your retirement from the *Journal*, I am prompted to write a fan letter thanking you for the improvements which have occurred under your direction. The *Journal* has become more attractive (I particularly like Ernie Craige's artwork) and the content more pertinent and "scientific."

I wish you well with whatever your third career turns out to be.

Lewis S. Thorp, M.D.
Boice-Willis Clinic, P.A.
100 Nash Medical Arts Mall
Rocky Mount, NC 27804

Blood alcohol concentration
To the Editor:

Thank you for the elegant presentation of Chaos, Alcoholism, and DWI (NCMJ 1991;52:394).

Other work continues to document the value of the blood alcohol concentration in predicting the course of alcohol related illness. The blood alcohol concentration at the time of admission to a detox unit has recently been shown to be predictive of subsequent withdrawal and treatment outcome.[1]

John R. Dykers, Jr., M.D.
P.O. Box 565
Siler City 27344

Reference
1 Vincent DC. Admission level: a predictor of the course of alcohol withdrawal. J Fam Pract 1991;33:161-7.

Comments on medical education articles
To the Editor:

Thank you so much for the excellent pair of articles on medical education (NCMJ 1991;52:307, 313). The article by Masted, et al., speaks quite vividly to "listening to the patient" with our physical senses, while Dr.Kendrick's article speaks clearly to the need to "hear" all that the patient needs us to know (sometimes against his/her wishes). After 40 years of practice in primary care and witnessing the extensive explosion in technology of most of the last half of the twentieth century, the truisms expressed in these articles still ring with extreme clarity. These articles could well serve as required readings on a quarterly basis for "medical students" of all ages.

The mix of articles contained in this issue constitutes a very well balanced presentation that should be of interest to all physicians with any broad interest in modern medicine. Thanks for your continued excellent efforts.

R.H. Shackelford, M.D.
Mount Olive Family Medicine Center
238 Smith Chapel Road
Mount Olive 28365

Medical Review of North Carolina—How long before they can learn?

The editor believes that the Journal *should record the history of the medical profession—past and present. A few years from now people will not believe that the Medical Review of North Carolina (MRNC) ever behaved in the way that it currently does. To preserve the record we publish some material received in response to Dr. Bryan's open letter to Dr. Snyder (NCMJ 1991;52:286).*

—Eugene A. Stead, Jr., M.D., Editor

Another letter to Dr. Snyder
To Dr. Snyder:

Your response to my letter (published in the June NCMJ[1]) was received on August 1 and is appreciated (could I give you a level one for procrastination?) My question as to how much "work" MRNC "accomplishes" was contained in your mailing to the society membership. That mailing did not contain the cost figures for your central office operation which you just supplied. I want to ask you to comment on them and on your view on the future evaluation and cost of what you folks are doing (Parkinson's Law).

The current figures which you have provided are breathtaking and scary:[2]

Annual Medicare Review Budget

Fiscal Period	Budget Amount
8/1/85-7/30/86	3,971,581
8/1/86-7/30/87	3,470,049
8/1/87-7/30/88	3,667,650
8/1/88-7/30/89	4,451,839
8/1/89-7/30/90	5,360,587

The trends indicated would lead to total take-over health care expenditures by this effort in a few years. The number of employees of course entertains an increasing number of folks:

Current North Carolina Staffing Level

Type of Staff	No. of Employees
Physicians	2
RNs	22
LPNs	12
RRAs	16
ARTs	9
Other (administration, financial, personnel, data, public relations, and clerical)	52
Total	113

The table below, which indicates quality review results, indicates that your people are doing less work—?? (Note decreasing number of reviews although the severity level determination pattern is different.)

Quality Review Results for 1986-1990

Review Date	Total Reviews	Quality Referrals	Percentage Total Reviews	Physician Consultant Confirmed Problems SLI	SLII	SLIII
8/86-7/87	57,789	13,417	23.2%	342	168	5
8/87-7/88	73,971	13,174	18.1%	484	163	4
8/88-7/89	57,488	8,069	14.0%	382	107	5
8/89-7/90	44,526	8,756	19.7%	144	267	28
Total	232,774	43,416	18.7%	1,352	705	42

I will not comment on the busy work outlined in your total work report, but it is my belief that you folks are generating and moving mountains of paper to uncover infrequent problems. I have asked my friends at the Health Services Research Center whether there is any proof that the Peer Review organizations have either saved money or improved quality of care, they said "no." Therefore are you peddling the Emperor's clothes?

Please instruct me on the "real" savings and good as you see it.

James A. Bryan II, M.D.
UNC School of Medicine
Department of Medicine CB #7005,
Old Clinic Building
Chapel Hill 27599-7005

Notes

1 Following which, many physicians wrote about details of the counter-hassle organization.

2 As previously noted, the cost to hospitals and physicians in time and money in meeting MRNC "demands" is unaccounted.

1. Dr. Trifiro's review

To Dr. Bryan:

I had my first PRO review recently. I discussed the case with Dr. A.T. Pagter and he showed me your letter to the Editor in the NCMJ, June, 1991. He suggested that I send you a copy of the review and response.

Neither Dr. Pagter nor I could figure out what the "Level Two" was because a urine analysis several days later was completely clean.

As I have been in practice only one year and am relatively new at this "game," I would be interested in your comments.

Richard G. Trifiro, M.D.
Appalachian Family Practice
P.O. Box 370
Columbus 28722

History and Physical

HISTORY: Patient is a 92 year old white female of Dr. Blomeley's with a history of acute anemia, peptic ulcer disease with gastric bleeding May 21, 1990, severe osteoarthritis, severe osteoporosis that had an acute pulmonary edema episode, a high output failure secondary to the acute anemia. The chief complaint at this time the daughter states is, the patient having difficulty breathing. This difficulty breathing occurred over the last 24 hours, reason unknown to the daughter. There have been no cold symptoms, no cough, no fever. The daughter decided the patient was having sufficient difficulty to be brought to the emergency room and evaluated.

MEDICATIONS: Tagamet occasionally and Tylenol for her leg and back pains.

ALLERGIES: Penicillin.

SOCIAL HISTORY: The patient is a widowed housewife. No ethanol. No tobacco use.

FAMILY HISTORY: Father died at 74 years old of a cardiac failure. Mother died at 66 of pneumonia.

ROS: As per the daughter. The patient has a state of confusion which is made worse secondary to medications. She has chronic back and leg pain and cramps and the chief complaint shortness of breath getting worse over the last 24 hours.

PHYSICAL EXAM: BP: 224/120. Pulse: 128 beats per minute. Respirations: 28 per minute, afebrile.

SKIN: Warm, moist and pale. Turgor poor.

HEENT: Perrla. EOM present. Retina is not well visualized secondary to cataracts. Ears, Tympanic membranes clear. Nose clear. Mouth very dry.

NECK: Upper airway wheezing. No stridor, no goiter, no bruits heard.

LUNGS: Decreased breath sounds, right base rales, left poor excursion.

HEART: Irregular irregular rapid heartbeat. There is a II to III + over VI systolic murmur over the precordium, radiates to the neck.

ABDOMEN: Soft, non-tender. Bowel sounds present.

EXTREMITIES: Knees arthritic changes. There are no edema, cyanosis or clubbing noted in the feet or hands.

NEUROLOGIC: Patient is restless, confused and has been having delusions of the curtain and railings around the ER bed as being painful to her body.

LABS: CBC, white count 11.2 53 segs, no bands, 42 lymphs, 3 monos, 2 eosins. Hgb 11.5, hct 34.1, platelets 444,000. UA, Sp. Gr. 1.008, pH 5, no blood. White cells, however, 50 to 60 white cell count. Bacteria 3+, this is a cath specimen. Chem 12—glucose slightly elevated at 164, the rest of the chem 12 are within normal limits. BUN noted at 15, creatinine 1.2.

DIAGNOSIS:
Acute pulmonary edema.
Atrial fibrillation, new onset.
Severe hypertension.
Urinary tract infections.
Severe osteoarthritis.
Osteoporosis.
Mild to moderate organic brain syndrome.

PLAN: Admit the patient to Intensive Care Unit for digitalization. She will be given 0.25 mg IV slow push q6hrs for 4 doses. It will be titrated as per her heart rate. The patient is to be diuresed with Lasix 40 mg. IV, first dose here at the ER, second dose is to be given at 7:00 AM. Input and output to be monitored. Patient will have a Foley. Patient will be given NTG paste topically to the chest wall q6hrs, monitored as per the blood pressure. Treatment of the UTI will consist of Bactrim, double strength BID and the patient will be given Tagamet IV over 24 hour infusion to prevent ulcer reoccurrence. The patient's care will be transferred to Dr. Blomeley after 8.00 AM.

Richard Trifiro, M.D.

Response from MRNC

To Dr. Trifiro:

As the designated Peer Review Organization (PRO) for the State of North Carolina, Medical Review of North Carolina, Inc. is required to monitor the medical care provided to Medicare beneficiaries.

Section 1156 of the Social Security Act imposes certain obligations upon health care practitioners and other persons who furnish or order services under Medicare. These obligations are to assure that the services are: 1) provided economically and only when, and to the extent they are medically necessary; 2) of a quality that meets professionally recognized standards of health care; and 3) supported by the appropriate evidence of medical necessity and quality of the services in a form and fashion as may be required.

Two PRO Physician Consultants have reviewed the above noted medical record. The findings of this review are as follows:

> A cathed urine specimen was noted to be positive on admission and Bactrim was started on 9/24/90. A urinalysis was obtained on 9/27/90, yet it does not appear that a urine culture was obtained. A urine culture should have been ordered.

Clarification is required.

Federal guidelines allow you 30 calendar days from the date of this letter in which to provide additional or clarifying information to resolve this potential quality issue. This information and the medical record documentation will be considered by a third physician consultant in making a final determination. A copy of this letter is not being mailed to the hospital. You are encouraged to share this information with a hospital representative if you wish assistance in submitting a timely response.

You may wish a telephone conference with a PRO physician or non-physician representative, as appropriate, concerning this case. To arrange for this, you should specifically request a telephone conference in your written response along with three dates and times that are convenient for you. MRNC will make every effort to schedule your telephone conference with a physician consultant on the dates you prefer and will send you written confirmation concerning when your telephone call should be made.

MRNC operating hours are 8:00 am to 5:00 pm, Monday to Friday. All calls must be scheduled during these normal business hours.

If you write a clarifying letter, but elect not to request a telephone conference, the record will be reviewed again by a third physician consultant. A final decision will be made following a third review of the record, which will include pertinent clinical information included in your letter.

Additional or clarifying information and requests for a telephone conference should be made in writing and must be received by April 22, 1991. In order to assure proper handling of your response, you MUST INCLUDE the patient's name and control number, which is located in the upper right hand corner on the first page of this letter.

If the PRO does not receive your additional information by the referenced date, the case will be processed in accordance with MRNC's Quality Review Protocol.

Ralph E. Snyder, M.D.
Director of Medical Affairs

Dr. Trifiro's response

To Dr. Snyder:

I admitted the patient on 9/23/90, at 11:30 PM, while on call. She was seen in the ER for acute decompensating pulmonary edema, new onset of atrial fibrillation. These were the main reasons she was admitted. The UTI found on a positive (50 to 60 WBC/hpf) straight catheterization was incidental.

The UTI was community acquired. Culturing the initial infection is a waste of time, effort and money since 90% of community acquired UTIs respond to the first line, ordered oral antibiotic. Cultures should be reserved, taken only for treatment failures or recurrent UTIs. The Bactrim DS, an appropriate oral choice, was ordered on 9/24/90 at 1:30 AM (two hours after the patient came to the ER), while the patient was receiving acute treatment for the pulmonary edema and atrial fibrillation. I was not about to

give her more fluids by starting an IV antibiotic dosing schedule. A repeat urine analysis on 9/27/90 showed the infection had cleared, also proving appropriate, cost-effective care. Culturing the urine on 9/27/90 would have been even more wasteful, since the antibiotic had effectively treated the infection.

Care was turned over to Dr. Charles Blomeley, the patient's primary care physician, at 8:00 AM, 9/24/90.

When will the primary care physician get fair consistent review? We have government "watchdogs" screaming for cost reduction, cost-effective medicine. Then we have your "kept" physicians practicing a "scratching at fleas while the dog dies" attitude.

If a culture had been done the most likely result would have been E. Coli. The bill would have been $30 for the culture and $30 more for the identification and sensitivity. A total of $60 for a patient that was going to receive an antibiotic anyway, and had a 90%> prospect of successful treatment without knowing the specific organism. Without a doubt, Medicare would have then denied payment on the urine culture, with the statement "test was not needed, not cost-effective," and chastised me for the senseless, cavalier waste of the taxpayer's dollar.

If the treatment failed, the patient would have had progressive symptoms, and a positive 9/27/90 urine analysis. The antibiotic would have been discontinued, and culture drawn.

Considering that the UTI was secondary to the patient's urgent primary illness, i.e., pulmonary edema, the UTI was community acquired, and the UTI responded to therapy as expected, the testing and treatment was correct and appropriate as ordered.

Richard G. Trifiro, M.D.

Response from MRNC

To Dr. Trifiro:

The additional information you have provided concerning the above referenced case has been reviewed by a third Physician Consultant. Based upon the findings of the three reviews conducted, the Physician Consultants involved concur that all available information indicates that a quality-of-care variation exists.

The specific quality-of-care finding(s) cited by the Physician Consultants are as follows:

> This patient had bacteriuria noted on a caheterized urine specimen and Bactrim was started. A urine culture with sensitivities was not done or requested.
>
> A urine culture and sensitivity should have been obtained This 92-year-old patient was extremely ill and the pathogen cannot be assumed to be E. Coli. Cultures and sensitivities are essential in determining the appropriate antibiotic to use. The need to know if a true infection was present was critical in the care of this patient.
>
> There was potential for worsening infection and sepsis, as well as inadequate treatment with incorrect antibiotics and potential for exposing the patient to unnecessary antibiotics.

A Severity Level of 2 has been assigned to this case.

Since quality decisions are not subject to reconsideration at this time, the result of this review will be entered in the MRNC data files. Where patterns of quality variation or the severity of the variations reach a level where some specific action may be justified to correct identified problems, a Quality Review Panel will review the appropriate case files. These Panels consist of Board Certified physicians in active practice in North Carolina. Should this or any of your cases go to one of these Panels, they may request additional information from you.

A copy of our Quality Review Plan, which outlines in detail our process in conducting quality-of-care review, is available upon request.

Your cooperation with the MRNC review program is appreciated.

Ralph E. Snyder, M.D.
Director of Medical Affairs

2. Dr. Hoffman's review

To Nancy C. Knox, RN, Review Supervisor, MRNC:

I am in receipt of your letters of April 22 and April 23 regarding (patient) and find them ABSURD!

How two physicians could review this medical record and come up with these conclusions is extremely bothersome; have these "physicians" had any practice in geriatrics or the care of elderly patients with multiple medical illnesses?

(The patient's) indications for chronic anticoagulation are extremely clear in her medical record. She has had multiple, documented episodes of recurrent thrombophlebitis dating back to 1970. She was hospitalized in 1970, 1972, 1980, 1981 four times, 1982, and 1987, with well-documented thrombophlebitis. There was also concern regarding pulmonary emboli in 1981. She also had documented hypertensive heart disease with documented left ventricular dysfunction, aortic and mitral valve disease, and recurrent supraventricular tachycardia and atrial fibrillation. The medical necessity of her anticoagulation is clear and was clearly referenced in the admission summary.

(The patient's) medical record easily verifies complicated multisystem illness primarily manifested by her severe vascular and heart disease. In addition, she has had significant arthritis, which has limited her ability to get around, but she did not have any known history of significant fall and had remained mentally competent to manage her affairs and to make her own decisions. Multiple attempts have been made in the past, not only by me but also by the visiting Home Health nurses, to arrange a supervised living situation. However, she has refused, and her decision was supported by her family. (The patient), as stated, was competent to make these decisions and had the right to do so.

(The patient's) hospitalization was indeed precipitated by taking her medication incorrectly. However, the visiting Home Health nurse "supervision" may have contributed to this because she had difficulty opening the container in which her medications were put, and therefore took her medications out and placed them in different containers, which apparently were mislabeled. A careful review of the reasons for her coagulopathy clearly identify this as the cause of her elevated prothrombin time, and during her hospi-

talization (the patient) was counselled, along with her family, and the visiting Home Health nurse, regarding the situation. Offers were again made for assistance with nursing home placement. Both (the patient) and her family refused. But (she) was not sent home unsupervised. There was extensive consultation with the family regarding my concerns for her well-being, and she was discharged home to stay with her daughter, although she insisted that she would be returning home alone. Arrangements were made for followup by the visiting Home Health agency. To suggest that (the patient) should have a full-time aide is a nonsolution, since such services are not available, and she refused any other alternatives. Her discharge home did not result in over anticoagulation, and, in fact, her prothrombin time several days after discharge was indeed therapeutic.

The real issue here is the fact that (the patient) fell while in the hospital. She clearly had an adverse event that occurred. To go back and make this a retrospective quality issue is unreasonable. Your conclusion that (she) should have been restrained is ridiculous. PATIENTS HAVE RIGHTS! (She) was initially placed at bed rest until her coagulopathy had been corrected with fresh frozen plasma. Once this was corrected, she was allowed to get out of bed and an appropriate order was written to ambulate her with assistance to ensure that her strength had returned to baseline. (The patient) was mentally clear at that time, and to strap her in a chair would have been inhumane. However, retrospectively, it is easy to say that if she had been restrained, she would not have fallen. That is not valid either. Your astute reviewer also noted that the resultant fall could have resulted in a cerebral bleed or fracture. This possibility also occurred to me, and appropriate x-rays and even a CT scan were obtained. There was no bleed or fracture.

This is not a quality issue. Quality care was provided. This is an issue of human rights, and I contend that the values of the reviewers for the PRO have nothing to do with compassionate humane medical care, but rather some self-fulfillment in maliciously directing blame for adverse events.

Byron J. Hoffman, M.D.
Chatham Hospital, Inc.
Siler City 27344

Home Health agency's letter regarding Dr. Hoffman's review

To MRNC:

The Home Health Agency of Chatham County was a provider of home care services for (the patient) from October 27, 1988 until January 7, 1991. As early as 1988, our Medical Social Worker along with Dr. B.J. Hoffman had encouraged (her) to enter a rest home facility but she adamantly refused. She also refused other suggestions such as the telephone alert system.

Although the son lived next door the family provided limited assistance. It was necessary for the Agency to provide personal care assistance to (the patient) three times weekly. (She) was mentally competent and capable of making her own decisions but sometimes forgetful. Hence the need for the nurse to routinely fill the medication box, and the nurse performed venipunctures for prothrombin levels to be reviewed closely by her physician.

Appropriately enough, after (the patient's) hospitalization for the dates of December 17, 1990, through December 27, 1990, (she) was discharged to her daughter's home. She was returned to the hospital on December 30, 1990, for a new onset of symptoms, where she expired.

It is our belief that while the home situation was not ideal, (the patient) was competent enough to make decisions regarding her choices. We provided nursing and personal care assistance established under Dr. Hoffman's supervision that allowed (the patient) to remain safely at home as long as she did.

Teresa S. Davis, RN
Nursing Supervisor
Chatham County Home Health

"Counter-hassle" letters to Dr. Bryan

To Dr. Bryan:

As a graduate of UNC School of Medicine, I was very happy to see your open letter to Dr. Ralph E. Snyder in the *Journal*. I am a physician who faced possible sanctions from Dr. Snyder and his board for missing a commonly missed problem, that of pulmonary embolism. It was not missed, I made the diagnosis, but it was delayed. I was dealt with rather harshly.

I was able to get out from under the sanction process that they had recommended of HCFA and now I am faced with a nine-month 100% review (which I detest), and 30 hours of CME credit (which I certainly do not mind). However, I know from discussing this with other physicians and nurses at our institution and being the medical director of the ICU, I get to see how other physicians in our area practice. I find it very difficult to understand how some physicians can escape the wrath of these people and others do not. I, however, realize that I am over-worked in an under-served area which may have something to do with it. I would be very much in favor of supporting a "counter-hassle" movement. In fact I recently wrote letters to the physicians who were referring patients to me stating I could no longer see their patients "inhouse" because of the hassles by the PRO. This was even prior to the attempt to have me sanctioned.

I think the only people who are suffering at the hands of these "watchdogs" are the patients. I feel this system is totally unfair and the people who should be observed more carefully are getting by without it.

Howard W. Newell, Jr., M.D.
2400 Wayne Memorial Drive, Suite 1
Goldsboro 27534

To Dr. Bryan:

I saw your query to Dr. Snyder in the *Journal*. I have been periodically reviewing some ENT records for this organization. I often wonder why I am willing to have anything to do with the organization, but on the other hand, I believe the system needs a few voices of reason in making some of these determinations. Of the dozen or so records I have reviewed in the last couple of years, there was not a single one that reflected what I felt what was inappropriate care.

What I see mostly are examples of quibbling over laboratory values that lie just outside someone's generic range and a push to get patients out of the hospital in an inordinately short time. Although the review folks deny it, there is clearly a coercion towards less than optimal medical care with their inflexible demands that certain surgical procedures are within a severely limited period of hospitalization. The most recent example of this was their insistence that an extremely elderly patient be sent home with a closed suction drain in her neck with no one to care for her except for her also elderly husband.

It would be nice to "throw the rascals out," but I'm afraid we will have about as much success with this as we have had with the politicians. Best of luck with your efforts.

Harry J. MacDonald, Jr., M.D.
Coastal ENT & Facial Plastic Surgery
Morehead Professional Center
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Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

November 1-2
Practical Pediatric Dermatology
Place: Durham
Credit: 8 hours Category I, AMA
Fee: $185
Info: Neil S. Prose, M.D., Pediatric Dermatology, Box 3252, DUMC, Durham 27710. 919/684-5146

November 14-15
ACLS Retraining Course
Place: Raleigh
Credit: 8 hours AAFP
Info: Helen Creech, R.N., Course Coordinator, Rex Hospital, 4420 Lake Boone Trail, Raleigh 27607. 919/783-3161

November 15
Prostate Cancer: Screening and Treatment Controversies
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

November 16
Osteoporosis: Diagnosis and Treatment in the 1990s
Place: Charlotte
Credit: 6 hours Catagory I, AMA
Fee: $35
Info: Joyce Scull, Arthritis Foundation, 6101 Idlewild Road, Suite 210-I. Charlotte 28212. 704/535-8303

November 16-17
George Ham Symposium
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

November 22-24
Winter Family Physicians Weekend
Place: Asheville
Credit: Approx. 12-14 hours, AAFP
Fee: $150
Info: Marietta Ellis, NC Academy of Family Physicians, P.O. Box 18469, Raleigh 27619. 919/781-6467

December 6-7
6th Annual Sports Medicine Conference
Place: Research Triangle Park
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

December 6-7
Management of Patients with Vascular Disease
Place: Chapel HIll
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

December 7
UNC Ophthalmology Residents' Day
Place: Chapel Hill
Credit: 6 hours Category I, AMA
Info: Ms. Christine C. Cotton, Department of Ophthalmology, CB #7040, Chapel Hill 27599-7040

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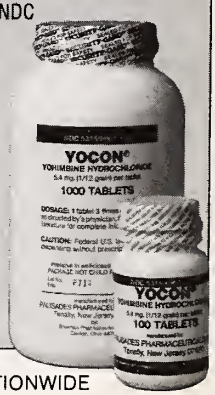
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References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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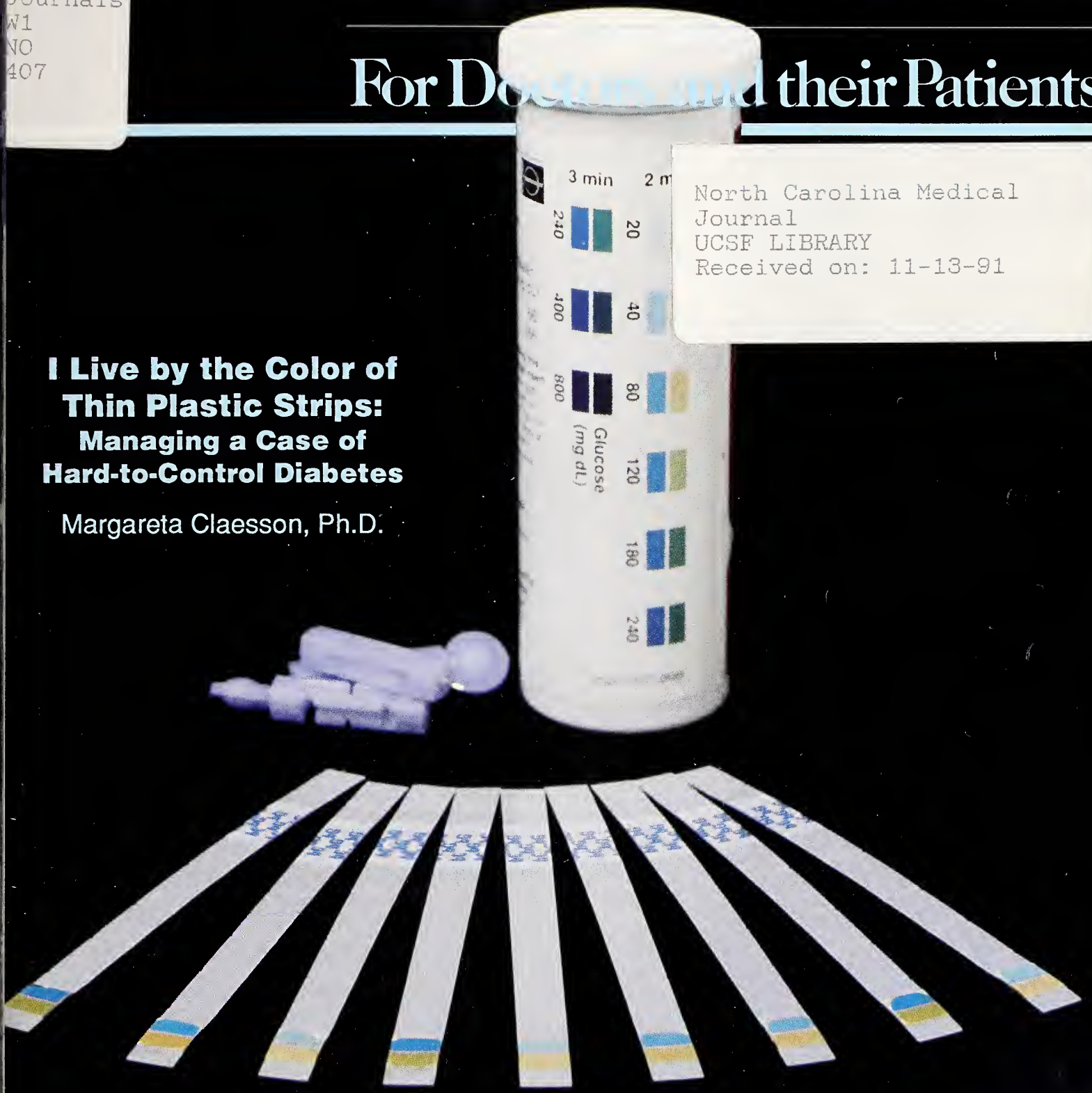
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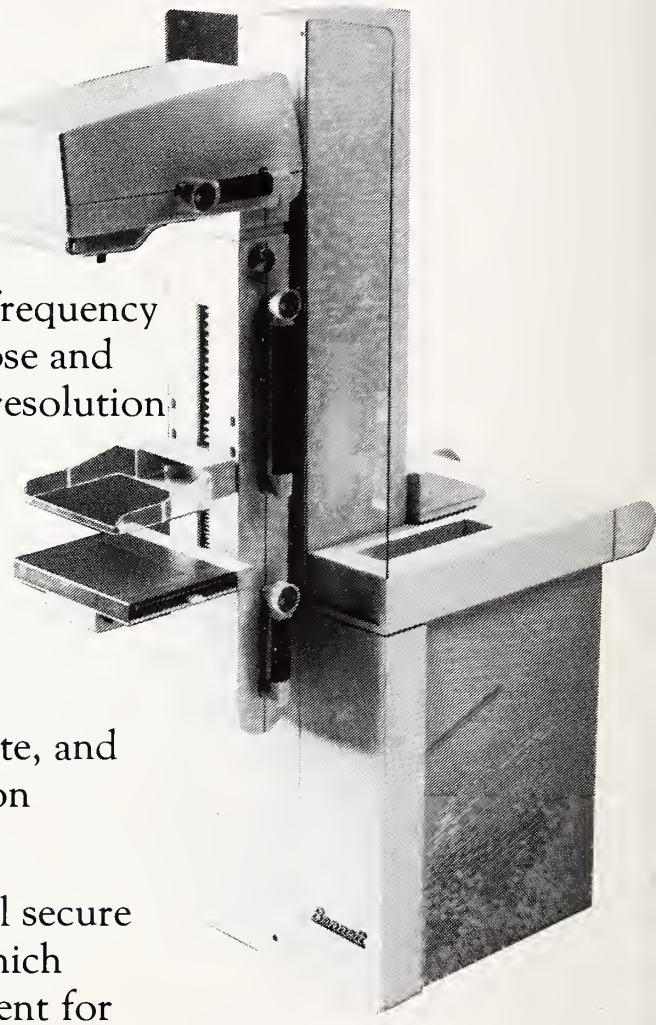
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Margareta Claesson, Ph.D.



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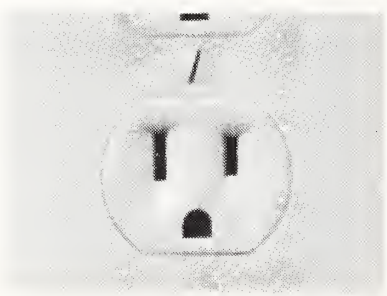


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For Doctors and their Patients

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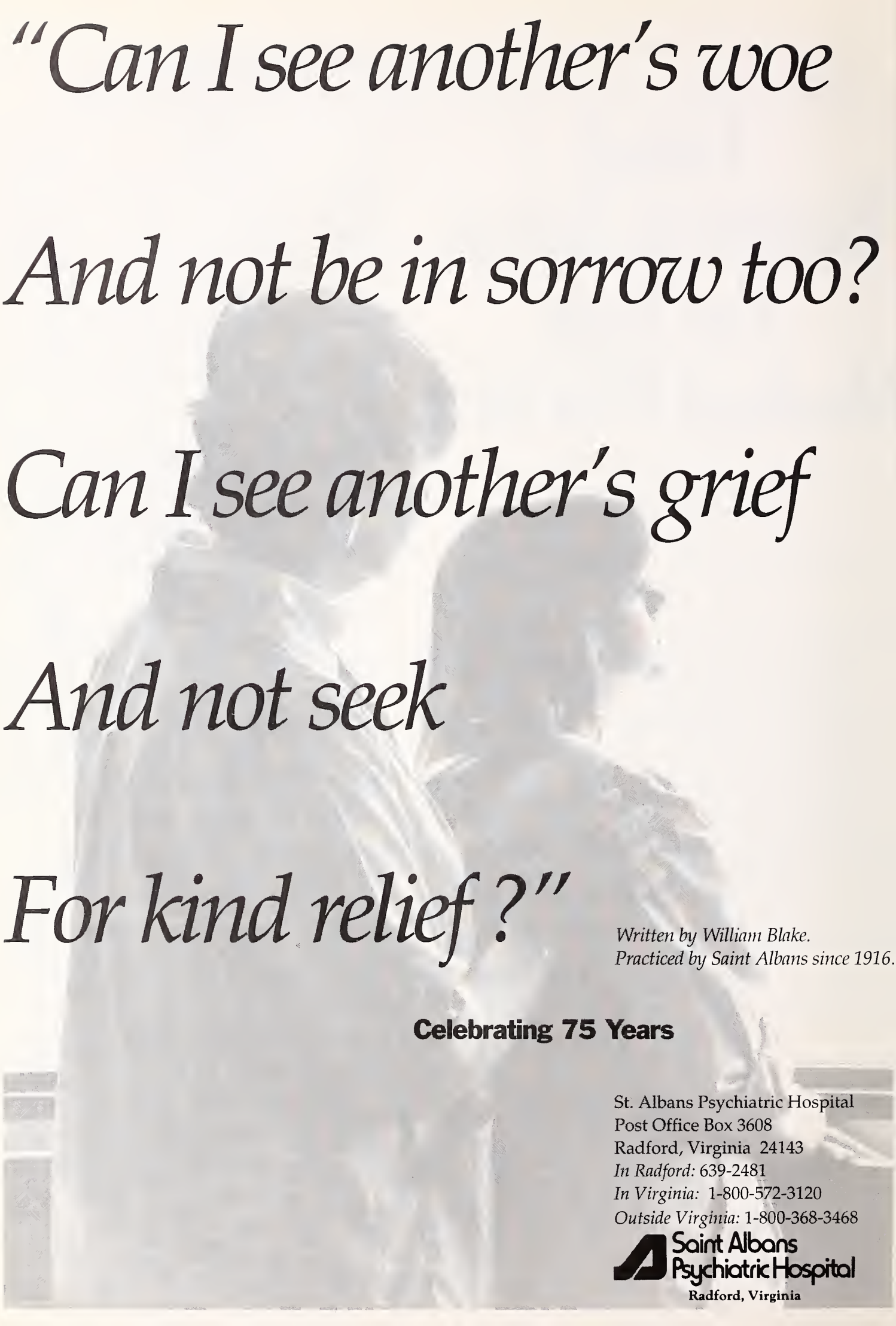
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The Importance of Intra-Abdominal Laparoscopic Examination During Laparoscopic Cholecystectomy

Mark H. Hennington, M.D., Robert D. Croom III, M.D., Mark J. Koruda, M.D., and Charles A. Herbst, Jr., M.D.

The introduction of the laparoscope into the armamentarium of the general surgeon has opened a new avenue for the diagnosis and treatment of intra-abdominal disease. It is estimated that 500,000 laparoscopic cholecystectomies (LC) will be performed in 1991, and as expertise and technological advances are being made, the variety and number of laparoscopic procedures will increase.

The enthusiasm of general surgeons for learning laparoscopic techniques is reflected in the number of courses nationwide and their attendance. The content of most courses emphasizes laparoscopic techniques for cholecystectomy with little on the general use of the laparoscope. From early in surgery residency training, routine exploration of the abdominal contents is instilled as part of all abdominal operations. In the age of the laparoscope, however, the extent of abdominal examination is obviously limited. The importance of general intraoperative examination should still be a routine part of any laparoscopic cholecystectomy. The examination through the laparoscope should be systematic and meticulous. We present a method for a safe, simple, and complete laparoscopic examination.

From the Department of Surgery, University of North Carolina Hospitals, Chapel Hill 27514.

Technique

All patients should receive nasogastric and bladder decompression prior to the insertion of any needles or trocars. The patient is placed in Trendelenburg position, and abdominal insufflation is performed with carbon dioxide through a Verres needle via a small periumbilical incision. An intra-abdominal pressure of 10 to 15 mm Hg (Volume 3-4L of CO_2) is obtained before placement of any trocars. Once insufflation is obtained, a 10 mm port is placed through the umbilical incision. Once position of the port is confirmed, a 10 mm 0° diagnostic laparoscope is positioned through the port.

The underlying small and large bowel should be inspected for bleeding, contusion, or perforation. Any surrounding adhesions which may be present should be examined for bleeding caused by introducing the trocars. With the patient in Trendelenburg position, the laparoscope should be passed into the pelvis, and visualization of the uterus, tubo-ovarian complex (in females) and distal sigmoid colon should be performed. The cecum and appendix should be visualized before the scope is removed from the pelvis. The patient is then positioned in reverse Trendelenburg and the scope passed over the right lobe of the liver. The diaphragm is inspected as well as the liver. On the left side of the falciform ligament the left lateral segment of the liver, gastroesophageal hiatus, anterior stomach, and left diaphragm are inspected. On retraction of the gallbladder cephalad, the undersurface of the liver, periportal area and pylorus can be inspected.

The omentum and parietal peritoneum should then be inspected prior to performing the planned procedure. On termination of the procedure each port entry site should be examined prior to removal.

During examination additional visualization can be obtained by gentle retraction at strategic locations from the additional abdominal entry ports. By using a probe through the midaxillary (most lateral) port, additional visualization of the cecum and pelvic organs can be obtained by gentle manipulation. By positioning the laparoscope through the subxiphoid port (routine during LC), a different perspective of the abdominal organs can be obtained. Positioning of the patient to allow gravity to work in your favor is of critical importance during the examination.

What pathologic abnormalities can be appreciated? On examination of the upper abdominal cavity, inspection of the liver for gross architectural changes or metastatic implants is important. Evidence of peptic ulcer disease, hiatal hernia, mass lesions of the stomach, and enlarged periesophageal lymph nodes should be sought. In the lower abdomen the small bowel, cecum, appendix, and sigmoid

colon should be inspected for cancer, diverticulosis, and inflammatory bowel disease. The gynecologic organs should be examined for abnormalities given the wide spectrum of disease processes that can be present. The presence of adhesions and their locations should be noted.

The list of abnormalities that can be visualized is endless. Accurate preoperative history and physical may give clues on areas to inspect more closely. As expertise using the laparoscope increases, both diagnostic and therapeutic capabilities will continue to improve.

Discussion

Laparoscopic cholecystectomy is an innovative procedure that has revolutionized a most commonly performed operation. More important, however, may be the re-introduction of the laparoscope into the field of general surgery. Without doubt the procedures that can be performed via the laparoscope will continue to increase.

One must not lose sight, however, of the limitations of laparoscopy. Thorough abdominal exploration is an essential part of all abdominal operations, and during therapeutic laparoscopic procedures this dictum should still hold true. No doubt limitations exist, as with any procedure; however, with diligence, abdominal exploration during laparoscopy can be safely and effectively performed. Examination with the laparoscope should be incorporated as much into the operative abdominal exam as the stethoscope is in the routine physical exam. ❑



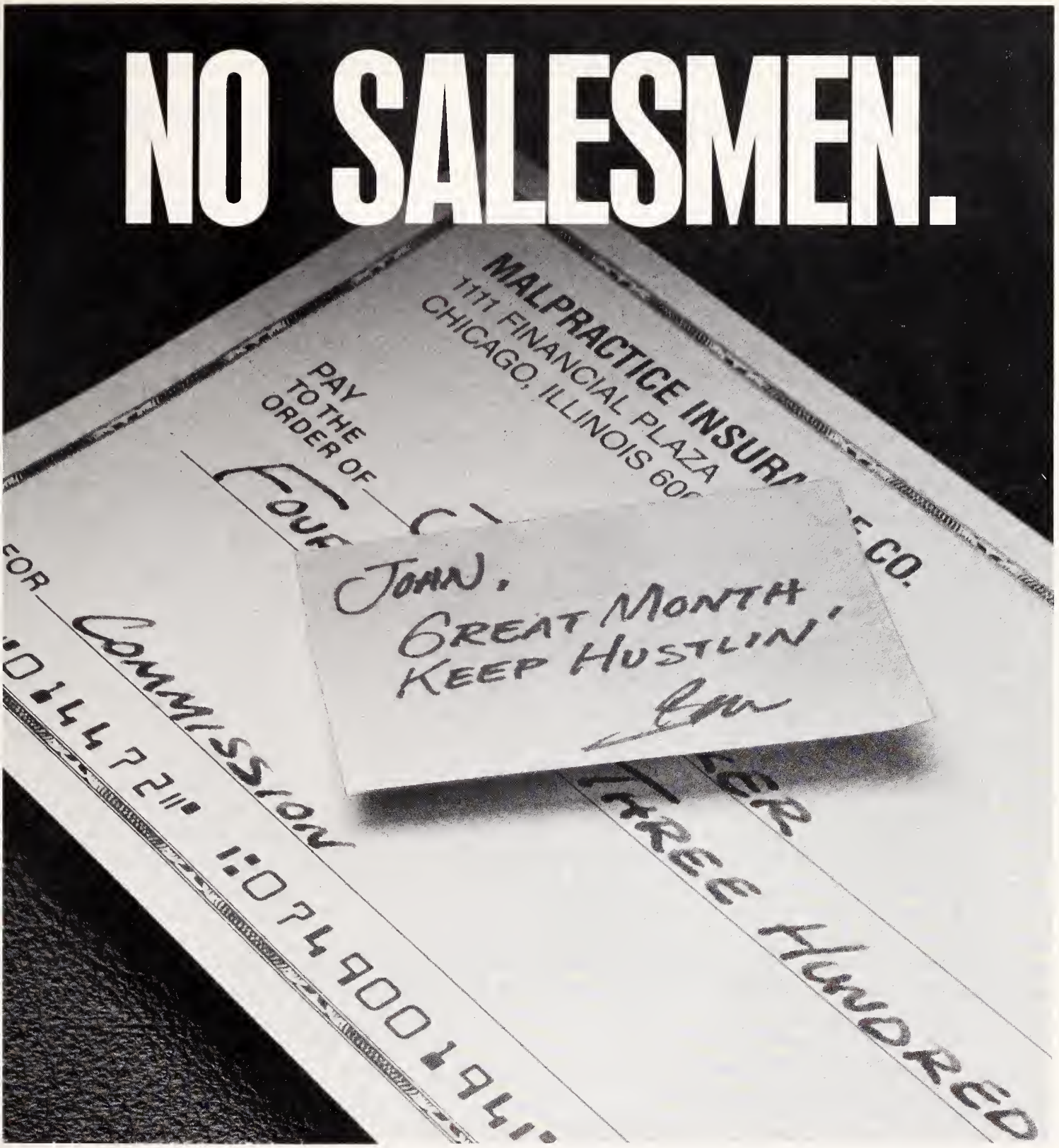
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Oral Considerations for the Cancer Patient

Peter B. Lockhart, DDS, and Mark J. Kutcher, DDS

Cancer treatment has advanced substantially in recent years, due largely to improvements in radiotherapy and chemotherapy. Cancer patients may require one or more chemotherapy drugs, radiotherapy or a combination of these treatments to destroy these rapidly replicating cells. Although cancer cells are the primary target of this treatment, normal cells may also be altered or destroyed in the process. These include the cells which make up the tissues in and around the mouth.

Some damage to normal tissue is an inevitable consequence of radiotherapy and chemotherapy. Other side effects are preventable complications which can be reduced in incidence, severity and duration by appropriate patient management. Many of the cancer patient's oral problems fall into this category.

This article discusses common oral complications of radiotherapy and chemotherapy and the preventive and remedial dental management that can minimize these problems.

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Complications of Radiotherapy

Cancer of the head and neck presents a wide spectrum of diagnostic and management considerations because of the complex anatomy of this region. Patients will almost universally have some type and degree of oral problems associated with radiation treatment that involves the face and jaws. Such side effects range from inflamed tissues (mucositis), dry mouth (xerostomia), and an inability to eat, to trouble speaking, difficulty controlling secretions, severe destruction of the teeth, and infection of the jaw bones (osteoradionecrosis). The potential for pain, infection and long-term functional disability with decreased quality of life dictate conscientious dental management before, during and following radiotherapy. These problems can be further subdivided into those which occur early and those which occur later on after radiotherapy.

Acute (Early) Reactions from Radiotherapy

Mucositis and Ulceration

Radiotherapy involving the lower face and jaws first affects the delicate mucous membranes and soft tissues of the mouth. Mucositis usually begins about one week after the start of therapy, and symptoms can arise soon thereafter. Mucosal breakdown or ulceration may occur, depending on a number of factors including the timing and total dosage of radiotherapy.

Mucosal ulceration occurs either spontaneously or from minor trauma from teeth, prostheses or even abrasive foods. These ulcerations occur most frequently on the lips and buccal mucosa adjacent to the teeth. Since most adults in the general population have some degree of periodontal disease, the vast majority of adult patients receiving radiotherapy will develop gingival ulcerations adjacent to their teeth. The mouth, with its normally large and diverse collection of bacterial flora, is of particular concern as a site for further treatment-induced infection. Ulcerations enable the significantly elevated number of pathogenic bacteria and fungal organisms, which form a dense mat between the teeth and the ulceration, to more easily invade the oral tissues and blood stream. Depending on the location, size and depth of the mucosal ulcerations, discomfort can range from mild and of little consequence, to severe pain which requires systemic narcotics. The degree and duration of painful mucositis can have profoundly negative effects on the patient's nutrition, sleep, and overall quality of life, and it can force an unscheduled interruption in the radiotherapy treatment plan.

Soft Tissue Infection

Early problems with oral infection most often involve the soft tissues of the oral cavity as opposed to the teeth and jaws. Fungal organisms are often responsible

for infection that occurs on the buccal and labial mucosa (lining of the cheek and lips), palate and dorsal tongue. This problem is largely due to radiotherapy-induced dry mouth and mucosal injury. This infection begins on the compromised mucosa and spreads to the adjoining mucous membranes. When soft tissue infection does occur, it should be treated with an appropriate topical antifungal agent in a dose, frequency, and duration schedule dictated by host factors and the extent of the infection. Treatment should continue for at least a week beyond the disappearance of the lesions to avoid a recurrence. Gingival inflammation and infection are present in all adults who have poor oral hygiene and who have not had a recent thorough oral prophylaxis. Although preexisting infection is usually asymptomatic, painful symptoms and spontaneous or traumatically induced bleeding may arise when gingival tissues are further destroyed during radiotherapy. Gingival disease is also exacerbated by other changes commonly associated with radiotherapy such as xerostomia, changes in the number and types of pathogenic organisms on the teeth and adjacent gingiva, and the increased intake of refined carbohydrates. Bacterial overgrowth may cause a generalized gingival inflammation. Severe, localized pain may indicate acute periodon-

Table 1. Management of Oral Sequelae of Head and Neck Radiotherapy

Problem	Time of onset	Clinical signs and symptoms	Treatment
Xerostomia	>1,000 cGy	Dry mucosa, thickened saliva	Sugarless lemon candy. Artificial saliva. Frequent rinses with baking soda and water
Mucositis	>1,000 cGy	Erythematous, painful mucosa; pain with hot, spicy or acidic foods	If mild—warm saline or dilute H_2O_2 rinses. Viscous Xylocaine or Kaopectate/Benadryl (50/50), rinse and expectorate. Benzocaine in orabase for isolated areas. Systemic pain medications (Tylenol, oxycodone or nonsteroidal anti-inflammatory analgesics).
Ulceration	>4,000 cGy	Mucosal breakdown, either spontaneous or with minor trauma	Frequent irrigations. Benzocaine in Orabase prn if localized; if extensive, see Mucositis above. Watch for secondary infection
Infection			
Bacterial	Variable, may be pre-existing	Pain, swelling, exudate, erythema, Most commonly affecting gingiva around the teeth	Antibiotics if systemic signs; scaling and irrigations if gingival in origin. If pulpal origin, open tooth for endodontics; if extraction necessary, high-dose, prolonged antibiotic coverage
Fungal	During radiotherapy	Usually Candida. Small plaques or thick white patches on oropharyngeal mucosa. May have sore throat	Mycelex lozenges dissolved in mouth 4-5 times/day. If ineffective, add Mycostatin lozenge to regimen. Consider Myconizole, one 250 mg tab q.d.
Necrosis			
Soft tissue	May be spontaneous or following minor trauma, usually seen following intraoral source of radiation or implant	Mucosal breakdown. Painful, slow healing	Avoid hot, cold, spicy foods. Benzocaine in Orabase for palliative relief
Bone	Usually seen following radiotherapy	Area of mucosal breakdown with exposed alveolar bone, usually asymptomatic	Careful removal of sharp spicules if irritating; necrotic bone will eventually slough. Frequent H_2O_2 rinses. If nonhealing, may require resection and/or hyperbaric oxygen
Taste Alteration	>1,000 cGy	Metallic or altered taste that usually resolves but may progress to permanent taste loss	Nutritional counseling
Trismus	Following high dose radiotherapy to the temporomandibular joint	Limited jaw opening, pain with further attempt to open; may be limited or permanent	Daily jaw exercises, dietary counseling, oral hygiene emphasis

tal infection, which is usually accompanied by swelling and purulent drainage from the tissue around a tooth. Bleeding with manipulation can occur with either of these conditions.

Acute infection of the dental pulp can occur during radiotherapy but this should be an unusual phenomenon following optimal preradiotherapy dental treatment. However, preexisting subacute pulpal infections are common, can be difficult to identify and can become acute at any time.

Problems Following Radiotherapy

Complications following radiotherapy are primarily related to changes in the salivary glands, bone, vascular and mucosal tissues. They include xerostomia, infection and taste alteration (table 1).

Xerostomia

Some degree of xerostomia, or dry mouth, is universal when the major salivary glands are irradiated. Dryness may begin as early as one week into therapy, and may last from several months to the lifetime of the patient. There is at least a partial return of saliva in most patients depending on dosage and the volume of irradiated salivary gland tissue. The maximal extent of this return may take from six months to over a year following radiotherapy.

During therapy, the saliva gradually becomes thicker and less abundant, and the pH may decrease from a normal of 6.8 to as low as 4.0. These changes can result in cariogenic (decay causing) organisms gaining predominance. Xerostomia leads to difficulty with speech, significant problems with chewing and swallowing food, and the need, in some cases, for constant irrigation with water. Long-term effects of xerostomia, can be even more serious.

Dental infection from xerostomia-induced caries (decay) is a common sequela following radiotherapy. Adequate salivary flow plays an important role in the remineralization of teeth by maintaining a balance between the loss and replacement of calcium and phosphorous from the surface enamel. In addition, patients who have full dentures may experience problems with retention of these appliances because of the loss of the film of saliva between the denture and the tissue.

In order to compensate for changes in taste and saliva, patients often select cariogenic soft drinks and sticky foods that lack a cleansing effect, which predispose to an acid environment and caries. Xerostomia-induced caries typically occur in the cervical (neck) areas around the teeth, and may rapidly progress to the pulp chamber, causing pulpal necrosis and infection. Bacterial organisms spread from the infected pulp chamber through the root apex into the periapical alveolar bone. With the compromised host defenses, a chronic infection develops which may subsequently become acute.

To manage xerostomia, patients may use one of several artificial salivas to help reduce the discomfort of dryness and the incidence of decay. These substances are intended to simulate the chemical makeup and viscosity of natural saliva. They therefore promote the replenishment of calcium and phosphates leached from teeth by a lowered salivary pH. Unfortunately, patients often object to the taste, cost or inconvenience of artificial salivas and return to using water instead. Pilocarpine hydrochloride reportedly stimulates saliva production in some patients and clinical trials are underway to determine its efficacy.

Bone Infection

Exposed alveolar bone, or bone infection from an abscessed tooth, is also a threat to the patient following radiotherapy. Radiation damage to the blood supply, especially in the mandible, compromises the healing potential. Radical neck dissection, accompanying surgical management of a primary tumor, may also interfere with the blood supply to the maxillofacial region and contribute to the risk of bone necrosis following surgery.

Taste and Nutritional Problems

Taste alteration or loss can develop following small volumes of radiation to the tongue. By 4,000 cGy, taste loss is almost complete, and it may be permanent at over 6,000 cGy. Recovery begins between 20 to 60 days following treatment, and, depending on the dosage, maximal recovery usually occurs within two to five months. Nutritional problems are universal following radiotherapy to the jaws and they can complicate the overall health of the patient.

Taste loss, xerostomia, and alterations in the muscles of mastication (chewing) and swallowing may limit a patient's ability to manage certain foods. As a result, patients may shift to a diet containing high quantities of non-nutritional cariogenic carbohydrates. Such a diet encourages the overgrowth of pathogenic bacteria which further complicates patients' oral condition after therapy.

Treatment Planning and Preventive Considerations

It was once common practice to extract all the teeth from patients about to receive radiation to the head and neck. However, it is not appropriate to remove healthy teeth from highly motivated patients, thanks to changes in radiotherapeutic techniques and an understanding that serious oral problems are largely preventable. In addition, the psychological and functional considerations for the preservation of healthy teeth far outweigh the risk of maintaining them. Preservation of the primary teeth is especially important in the pediatric patient, since radiotherapy may result in incomplete development and/or eruption of the permanent dentition.

It is clear that extractions within 10 days of the onset of radiotherapy should be avoided whenever possible. Dental extractions during this time, and following radiotherapy, are high-risk procedures, even with appropriate antibiotics. This applies to patients who receive

Table 2. Common Oral and Dental Complications of Chemotherapy

Problems	Time seen following chemotherapy	Clinical signs and symptoms	Laboratory findings	Treatment	Course
Acute necrotizing ulcerative gingivitis (ANUG)	Variable: may be unrelated to chemotherapy but incidence increases with neutropenia	Gingival pain and bleeding. Fever. Lymphadenopathy. Gingival necrosis with punched-out papillae. Fetor oris	May see leukocytosis if no myelosuppression. Fusospirochetal organisms on smear	Parenteral antibiotics, penicillin drug of choice if immunocompetent. Oral debridement.	Resolves foll appropriate treatment in days
Angular cheilitis	Anytime, but increases with xerostomia	Cracking, bleeding, possible exudate and pain in corners of mouth	Smear may demonstrate fungi	Check vertical dimension of teeth. Mycolog ointment	Watch for se ary infection
Gingival bleeding	Variable, 10-14 days, increases with thrombocytopenia	Marginal hemorrhage from gingiva. May be spontaneous. May be presenting sign	Thrombocytopenia	Platelets. Topical thrombin solution applied with 2x2 sponges. Aminocaproic acid. Undisturbed clot. D/C mechanical hygiene	Resolves as platelets incr
Herpes labialis	Anytime	Crops of vesicular lesions at or near mucocutaneous junction; frequently extraoral with no anatomic distribution	Smear of base of vesicle; increased N/C ratio and viral inclusion bodies	Prevention: keep lubricated; often secondary infection in neutropenic host. Systemic Acyclovir for failure to heal and immunosuppressed	10-14 days, depending o resistance.

greater than 5,000 cGy to the region of the oral cavity. If extractions become necessary, these patients should be considered for hyperbaric oxygen treatments before and after the surgical procedure.

A thorough dental evaluation prior to head and neck radiotherapy helps minimize infectious complications that occur with the teeth, gingiva and other hard and soft tissues of the mouth. Scrupulous oral hygiene measures, which may require topical anesthetics, will reduce the bacterial population and, therefore, the degree of gingival inflammation and potential for infection and bleeding during radiotherapy.

Patients should also be counseled about the direct relationship between sucrose and refined carbohydrates and the overgrowth of pathogenic bacteria. They should be encouraged to maintain a balanced diet with limited quantities of cariogenic foods to assure optimal oral health during and after radiotherapy.

Daily topical fluoride use initiated before therapy helps to prevent caries and eliminate post-irradiation hypersensitivity to hot, cold, acidic and sweet foods. Patients should be instructed to clean their teeth with a soft bristle brush and floss. Eliminating plaque from well-restored teeth each evening, and using a prescription fluoride gel or rinse, will virtually eliminate the possibility of xerostomia-related caries.

Following radiotherapy, and perhaps for the patient's lifetime, dental management consists of close monitoring of oral hygiene and the daily use of topical fluoride. A hygiene recall schedule should be designed that reflects individual needs with respect to the potential for oral infection and compliance with home care.

Complications of Cancer Chemotherapy

Cancer chemotherapy has a number of effects which create problems in and around the mouth. These include a reduction in mucosal basal cell renewal and in white cell and platelet production. Resulting oral complications include mucositis, ulceration, pain, bleeding, xerostomia, and soft tissue and bone infection. These are particularly significant problems during periods of bone marrow myelosuppression because the mouth is an important portal of entry for a large variety of bacterial and fungal pathogens.

Not all patients are equally at risk for developing complications. Patients with hematologic malignancies (leukemia and lymphoma) develop oral problems at a rate three times that of patients with solid tumors. Oral complications decrease with age, due in part to the differences in the diseases and the agents utilized at different ends of the age spectrum. Patients with pre-existing dental disease are at greater risk for developing problems than patients with healthy mouths. Ideally, all patients about to undergo myelosuppressive cancer therapy should first be thoroughly evaluated by a general dentist with experience in this arena, who, given the nature and scope of oral problems encountered, can offer the indicated treatment (table 2).

Bleeding

The oral cavity is often the first site to manifest inherited and acquired coagulopathies, and bleeding may herald the finding of an undiagnosed malignancy. The gingival crevice, because of preexisting ulceration from periodontal disease, is more prone to either spontaneous or traumatic bleeding following cytotoxic drug therapy. The combination of compromised mucosa, thrombocytopenia, and

ble 2 (continued). Common Oral and Dental Complications of Chemotherapy

oblems	Time seen following chemotherapy	Clinical signs and symptoms	Laboratory findings	Treatment	Course
iliasis	Anytime. More likely with prolonged neutropenia, antibiotics, or steroid use	White plaques. Tender. Affects buccal and palatal mucosa most frequently. Corners of mouth may be affected, especially in edentulous patients (see angular cheilitis)	Neutropenia, smear of organisms. Positive Ba++ swallow with esophageal involvement (watch for false negative)	Mycostatin or Mycelex lozenges several times/day. Amphotericin if esophageal or systemic involvement suspected	Resolves with antifungal treatment or with increased PMNL
osal bleeding	10-14 days	Hematoma or bleeding area, especially mucosal sites commonly traumatized. In case of neutropenic patient, likely chance of secondary infection Watch for sublingual or pharyngeal extension and airway obstruction	Thrombocytopenia Blast crisis with decrease in platelet function	Remove dentures and other sources of irritation. As above, cover for secondary infection	Resolves with increased platelets. Resolving hematoma may extrude granulation plug from healing base; do not disturb
ositis and ration	Direct stomatotoxicity: 5-7 days.	Mucosal erythema or broad, shallow to deep ulceration on mucosa with necrotic centers and dense surrounding band of erythema.	Early leukopenia but precedes nadir. Neutropenia	Palliation with viscous Xylocaine; Benadryl and Kaopectate; Dyclone; or cocaine rinses; benzocaine in orabase for discrete lesions	Resolves following chemotherapy
	Indirect stomatotoxicity: 10-14 days	Poorly defined borders. May be hemorrhagic. May involve keratinized tissue. Often at gingival margin especially in neutropenic patient		If secondary infection, parenteral antibiotics to cover gram(-) organisms in addition to conventional flora (gram(+)). Hemorrhage: topical thrombin, soft bland diet as tolerated	
ntogenic tion in losuppressed	Anytime	Variable, may present with fever of unknown origin, swelling, pain, lymphadenopathy. Swelling not consistent finding with neutropenia May be subclinical until increase of PMNL	Neutropenia. Positive blood culture	Parenteral broad spectrum antibiotics to cover for opportunistic organisms and normal flora. Remove source in presence of adequate cells (WBC>1,000/mm_3 and reasonable PMNL and >25,000/mm_3 platelets)	Variable: depends on organism, counts, location
ary gland tion	Anytime, most common in debilitated patient with diminished oral intake and dehydration	Swelling (may be unilateral or bilateral). Pain. Suppuration from duct when no myelosuppression, Xerostomia. Fever	Variable, bacterial cultures Staph sp. May be viral: cytomegalovirus most common	Antibiotics (parenteral) to cover strep and staph if bacterial. Rehydrate	Resolution depends on host status and treatment
stomia	Variable, usually resolves following discontinuing chemotherapy	Dry mouth, thick ropy saliva. Diminished taste sensation. Metallic taste in mouth. Difficulty with speech and nutrition	Noncontributory	Lemon glycerine swabs. Ice chips. Saliva substitute. Fluoride (Fl) rinses	

treatment-induced coagulopathies all predispose to oral bleeding.

Oral hemorrhagic phenomena secondary to drug induced thrombocytopenia can manifest in a variety of ways. For example, petechiae may be observed on the lips, soft, or hard palate. Minimal trauma can result in submucosal hematomas in any intraoral location. Spontaneous gingival oozing is quite variable as it may occur in some patients with greater than 40,000 platelets/mm^3 or it may not occur in patients with less than 10,000 platelets/mm^3. In addition to platelet numbers, impaired platelet activity, capillary fragility, preexisting mucosal compromise and other factors all combine to predispose to oral bleeding.

Xerostomia

Dry mouth, or xerostomia, can occur during chemotherapy, and it is a particularly bothersome problem as it interferes with speech, taste, and eating, and can aggravate an already painful mouth. Further, the types and number of oral organisms change with a decreased salivary output, and the patient with a dry mouth will tend to acquire fungal and bacterial overgrowth.

Pain

Oral pain is the most common complaint from patients who undergo cancer chemotherapy. Pain arising from the mucosal tissues is usually a result of chemotherapy-induced direct or indirect stomatotoxicity. Direct stomatotoxicity usually manifests itself within seven days of the onset of chemotherapy and appears to originate from the interruption of mucosal cell division and a resultant thinning of the mucosa. Tissues may appear erythematous, glistening and swollen as well as sensitive to any manipulation. There may be constant pain that limits speech, sleep, and food intake. The severity of pain can vary, ranging from mild soreness in an isolated area to extreme and diffuse pain that requires narcotics for control.

Indirect stomatotoxicity is the result of myelosuppression and it usually occurs greater than 10 days from the start of chemotherapy. The occurrence and severity of pain is often directly related to the degree of preexisting mucosal disease and the degree and duration of bone marrow suppression. The pain from direct and indirect stomatotoxicity is managed palliatively with one or more of a variety of topical anesthetics and/or systemic analgesics or narcotics.

Infection

The majority of cancer patients who die following chemotherapy succumb to infection. Since the oral cavity is a reservoir of pathogenic organisms, mixed bacterial infections in the mouth are relatively common. In addition, there is neutropenia-induced alteration in the oral flora towards more pathogenic organisms as the mouth serves as a warm, dark and moist culture medium for bacterial overgrowth.

The signs and symptoms of infection of dental origin are clearly altered in immunocompromised patients. A rise in temperature may be the only indication of infection, as the lack of inflammatory response may decrease or eliminate pain and swelling as presenting symptoms. Sensitivity to palpation, percussion, and chewing may be absent. Dental infections may remain quiescent during profound neutropenia until the return of an adequate number of neutrophils to the peripheral blood. Neutrophils marginate to the site of infection, pus is formed and the patient then becomes symptomatic. In fact, a characteristic change in the appearance of the gingiva or an ulcerated area may herald the return of white cells to the peripheral blood before this can be detected by laboratory methods. Odontogenic infection in the bone around the teeth should be managed nonsurgically if possible until the patient's blood counts return to an acceptable level for an invasive procedure. Medical management of localized infection until the absolute polymorphonuclear leukocyte count exceeds a critical level may be controversial, but it ensures that an extraction-associated bacteremia will not cause an overwhelming sepsis.

Soft tissue infections during neutropenia usually begin as an area that is invaded with one or more of the following organisms: Pseudomonas, Serratia, Klebsiella, Escherichia coli or Candida albicans. Soft tissue infection commonly occurs around the crevices of teeth where ulceration and necrosis are common prechemotherapy findings. Soft tissue infection of any degree should be monitored closely as systemic involvement may occur.

Treatment of soft tissue infections depends on several factors. No single antibiotic is effective against all potential causative oral organisms, and multiple parenteral drug combinations should be considered, especially in the neutropenic patient. Difficulty often arises in determining which mucosal lesions represent a threat to the patient. It may be difficult to differentiate between soft tissue sloughing from direct or indirect stomatotoxicity, oral candidiasis, gram negative or superficial infection that may be walled off from the systemic circulation, and deep invasive infection that requires immediate attention. Often the decision to use systemic antibiotics or antifungals will not rely on the signs or symptoms of infection such as fluctuance, swelling or pain, but is based more on the presence of fever or clinical evidence of sepsis. The potential seriousness of these infections leads to the use of antibiotics, antifungals and antivirals sooner than would be contemplated in the immunocompetent host.

Fungal infections, usually candida, are common in this patient population. Intraoral candidal lesions may appear as superficial, raised white patches with or without an erythematous margin. Removal of the patch with a tongue blade leaves an ulcerated base that may be hemorrhagic. Since candida is a normal inhabitant in the mouths of 25% to 60% of the general population, cultures for candida are of questionable value. The ultimate concern is for spread of the fungal organisms to the esophagus or bronchus which can result in a serious if not fatal infection.

Patients with candidal infections may be started on either Nystatin, swish and swallow, or Mycelex troches when the white count begins to drop below an acceptable level. If oral signs of candida appear, however, the dosage and frequency of the medication should be increased. The patient should be followed closely for evidence of extension of infection to the esophagus. There is usually a rapid resolution of the fungal infection with a return of polymorphonuclear leukocytes to the peripheral circulation. In some patients marrow regeneration may be heralded by a spontaneous sloughing of the oral candidal plaques about 24 hours prior to the return of neutrophils to the peripheral circulation.

Soft tissue lesions should be kept clean to decrease the amount of growth media for organisms and discomfort to the patient. This should be done carefully with wet 2x2 sponges, Q-tips and some

Table 3
General Principles of Prevention for the Patient on Cancer Chemotherapy

Patient and medical/nursing staff education

Meticulous oral hygiene:
- Professional cleaning if possible and blood counts permit. Do not discontinue hygiene with administration of chemotherapy; continue until neutropenic or clinical intolerance (bleeding, pain, low counts) then switch to gauze cleaning (wet 2x2 wrapped around finger). H_2O_2-H_2O (1:1) rinses several times/day; decrease percentage of H_2O_2 if it irritates mucosa.

Eliminate all sources of irritation:
- Remove all oral appliances including orthodontic retainers and bands, and leave out with onset of myelosuppression. Eliminate sharp teeth by smoothing or extraction.

Eliminate potential sources of infection as time permits:
- Remove overhanging margins on crowns and restorations. Extract questionable teeth (caries, periodontally involved). Extract partially erupted third molars. Apply Vaseline to dry cracked lips.

Antifungal therapy:
- Nystatin rinse 200,000-400,000 U swish and swallow qid when WBC nears nadir. Mycelex lozenges may be better tolerated and they prolong contact with mucosa.

Increase resistance to nutritional & xerostomia-induces caries and periodontal disease:
- Meticulous oral hygiene.
- Fluoride rinses qd.
- Careful diet; avoid sucrose and refined carbohydrates.
- Artificial saliva.
- More frequent professional cleanings.

combination of sterile saline or water, hydrogen peroxide or sodium bicarbonate. Care must be exercised as overzealous debridement may cause bacteremias and expose these painful ulcers to the oral environment.

The most common virus affecting the lower face and mouth of these patients is herpes labialis. Intraoral herpes occurs on occasion but is often mistaken for other conditions manifesting erythema, ulceration or infection. Viral lesions within the mouth do not usually demonstrate a blister appearance but are usually seen as a cluster of small ulcers that soon coalesce to form large, irregular ulcerations which often become secondarily infected. These lesions may have a central, usually gray or off-white area of necrosis with a surrounding broad band of erythema, depending on their bone marrow status. An early culture may be helpful in determining which intraoral lesions are of viral etiology.

Nutritional Considerations

Nutrition often becomes a particularly difficult problem for these patients. Sucrose and refined carbohydrates should be eliminated, as much as possible, from the patient's diet, as this will help to reduce the progression of decay and periodontal disease. Abrasive foodstuffs such as toast can traumatize the fragile and otherwise compromised mucosa, and cause a break in the barrier to the oral microflora. Citrus fruits and spicy foods can be very irritating and should not be given to patients with mucositis or ulcerations.

Pretreatment Evaluation

The prechemotherapy oral status, in particular the presence of pulpal and/or periodontal disease, greatly influences the incidence of oral morbidity during cancer chemotherapy. Prevention of many of these oral complications is therefore possible with comprehensive dental management.

Although most oral disease is managed with a surgical rather than a medical approach, cancer patients frequently manifest their oral problems at a point in their therapy when invasive procedures of any type are contraindicated. These patients therefore must often be managed medically until more definitive treatment can be performed. Often the most difficult dental decisions to be made are those concerning the type, timing and aggressiveness of the indicated dental therapy. Careful treatment planning can help to avoid the needless physical risk and psychological trauma from the removal of teeth on a non elective basis. Hopeless teeth, however, should be extracted under appropriate circumstances. Scaling should leave the remaining teeth clean of any plaque deposits.

An advantage of the early initiation of dental therapy in the overall management of cancer patients is the opportunity to discuss oral problems that may occur. Many patients become highly motivated in oral care once they are aware that the mouth is a potential source of problems and that they can play an active role in their prevention. Patients must understand the rationale for scrupulous oral hygiene and then be instructed in hygiene methods meaningful for their particular situation (table 3). The dental hygienist, if available, is an excellent resource for help in this endeavor. In addition, the patient's nurse should also become actively involved with mouth care. Nurses spend greater amounts of time with the patient and can supervise, if not carry out the indicated preventive measures, which may vary greatly depending on the patient's level of myelosuppression and ability to tolerate soft-tissue manipulation. A combination of scrupulous hygiene, low sugar intake and fluoride rinses may significantly decrease the possibility of an acute situation.

Summary

An increasing number of patients are undergoing cancer chemotherapy and/or radiotherapy and are experiencing side effects in their mouths. A thorough oral examination is important in the overall pretherapy evaluation of these patients,

and, along with a consideration for the patient's disease, treatment, prognosis and laboratory values, allows for realistic planning for dental management prior to, during and following cancer therapy. The early establishment of a good working relationship with the patient and those caring for him or her, and an understanding of the importance of compliance with oral hygiene will eliminate needless therapy-induced morbidity and mortality. ❑

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Medical Consultant's Comment

It is helpful for oncologists and generalists to have a survey article covering the topic of oral sequelae of x-irradiation and/or chemotherapy. However, knowledge to enable recognition of a particular consequence is not the major goal for the authors. Rather, as dentists, they are emphasizing the role of dental management in pretreatment planning as the method for preventing some of the more serious oral problems that can follow therapy for cancer.

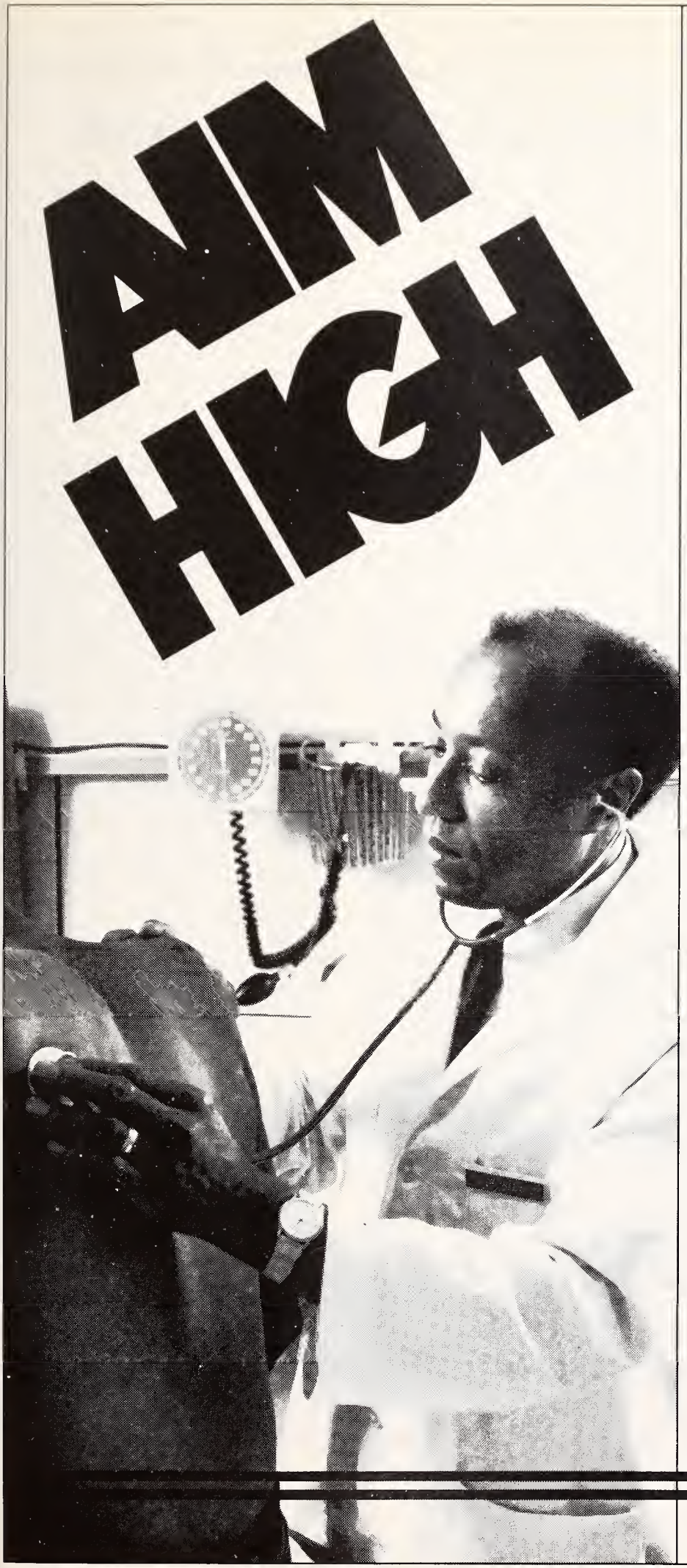
One must believe that plaque, a diet rich in refined carbohydrates, periodontal disease with preexisting microulceration of gingival crevices, and long-standing pulpal necrosis, all predispose to a variety of mucosal and odontogenic infections. In order to counsel patients effectively, one must also believe that preventive measures will reduce the frequency and severity of some acute and many late reactions. As the authors point out: "...preventive measures for eradication and control of oral disease are never more important than for these patients," and, "thorough dental evaluation prior to radiotherapy is mandatory to minimize infectious complications."

But how does the physician engineer compliance in an area of epidemic noncompliance? Many of us have been able to stop smoking or eliminate cholesterol from our diets. Yet, who amongst us brushes their teeth as well as gums twice daily and flosses frequently? Combine that ingrained tendency of denial with a sense of urgency to begin treatment along with an appropriate overemphasis upon planning chemical dosages or radiation portals, and you have a situation doomed to failure in many instances.

Only when the oncologist plans for success every time, by which is meant eradication of malignant disease with preservation of as much normal tissue and function as is possible, and only when that philosophy is important to the patient, can it be expected that the individual with a newly diagnosed malignancy will be willing to go see a dentist first before beginning definitive therapy for the malignancy!

But what about the more frequent situation wherein the physician or the neoplasm (usually leukemia or lymphoma) dictate earlier intervention that precludes aggressive dental prophylaxis? Then, both the patient and physician must be prepared to recognize and manage as early as possible each sign of stomatotoxicity so that there are not "forced unscheduled interruptions" in the chemo-radiation treatment regimen. It should be noted that such interruptions may be just as damaging psychologically as deferring treatment immediately after the diagnosis of cancer in order to carry out the preventive dentistry advocated by our colleagues.

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AIR FORCE

HIV Testing, Informed Consent, and Confidentiality

Candace Cummins Gauthier, Ph.D.

The epidemic of acquired immune deficiency syndrome in the United States is now entering its second decade. The first cases of AIDS were identified in 1981.[1] As of May 31, 1991, 179,136 people had been diagnosed with AIDS in the United States and 113,000 of them had died.[2] In addition, the Centers for Disease Control have estimated that one million Americans are infected with the human immunodeficiency virus (HIV), which causes AIDS.[3]

As the public has begun to recognize that this infection is not confined to certain populations nor to large metropolitan areas, the fear of infection has grown. This is especially true among health care providers, many of whom perceive their risk of infection with HIV to be unacceptably high. Some physicians and dentists, for example, have simply refused to treat HIV infected patients. Yet, this policy obviously does not provide protection against the majority of the one million infected Americans who themselves are not aware that they have the virus.

In North Carolina, as elsewhere, public health regulations require health care workers to employ blood and body fluid precautions with all patients.[4] However, punctures with needles and surgical instruments are still possible even through gloves; and contact of body parts not covered, such as the face, with infected blood is still possible during some procedures. While the medical literature places the risk of health care providers contracting the virus through accidental contact at .43%,[5] even this low a risk is deemed unacceptable to many in the health care field.

The North Carolina Medical Society addressed these concerns at its annual meeting in November, 1990, and voted to seek one legislative change which would presumably afford more protection to those working in the health care professions. Specifically, the Society supports legislation allowing attending physicians to test their patients for HIV infection without specific informed consent.[6] Although the Medical Society has adopted the American Medical Association policy in favor of anonymous testing, many physicians support the position of the state Commission for Health Services, which has decided to gradually eliminate this type of testing for HIV in North Carolina.[7] Anonymous testing, in which the patient's name is not recorded, has been available at all 100 public health departments in North Carolina. On September 1, 1991, the number of sites offering anonymous testing for HIV was reduced, to a minimum of 16; and by September 1, 1994, anonymous HIV tests will not be offered in North Carolina unless further evidence supports their continued availability in the state.[8] Once anonymous testing is eliminated in North Carolina all tests for HIV will be confidential, with positive test results reportable by law, meaning that the patient's name, address, telephone number and Social Security number will be reported to both local and state health officials.[9]

Both the possibility of eliminating the specific informed consent requirement for HIV testing and the actual decision to eliminate anonymous HIV testing in North Carolina are alarming and raise serious ethical questions about the way we as a society choose to respond to this epidemic. They also clearly point out the conflict we face between the personal rights and interests of the individual and the protection of society from harm. Certainly a review of the moral arguments which might be marshalled in defense of these actions and those which can be offered against them is called for.

Informed Consent

Present North Carolina law allows patients to refuse to submit to physician recommended tests for HIV. The law states, " ... if informed consent is not obtained, the test may not be performed."[10] Although a law to allow testing for HIV without specific informed patient consent is very unlikely to be enacted in North Carolina in the foreseeable future, it remains important to evaluate the relevant moral arguments.

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The major argument in favor of testing without specific consent may be that with this power health care providers can obtain the information they perceive as necessary to protect themselves from infection with HIV. Physicians could require HIV testing as a prerequisite to treatment, as a routine part of treatment, and/or as part of pre-surgical blood testing. They might then take various steps to protect themselves. They might take extra precautions with HIV positive patients. They might refuse to treat or operate on those infected with the virus. This argument received particular attention from Dr. Bartlett in his *North Carolina Medical Journal* editorial, "HIV Testing in North Carolina."[11]

Physicians may argue that this type of law is necessary to protect their own autonomy. The medical profession has traditionally reserved the right of physicians to determine whom to treat. The use of HIV testing will allow physicians who choose not to treat patients infected with the virus to make this determination based on adequate, relevant information.

An additional argument that could be used to support testing for HIV without specific patient consent is that such testing will allow physicians to provide better quality treatment for their patients with the virus. They can then offer AZT and enroll their patients in clinical trials of experimental drugs. They can also treat their patients' opportunistic infections more knowledgeably and take better precautions to prevent post-operative infections. Dr. Fulghum, in his *North Carolina Medical Journal* editorial, "AIDS: Testing and Reporting," provides a variation of this argument focused on making HIV-positive patients aware of their infection so that they can seek early treatment.[12]

There are also arguments against HIV testing without patient consent based both on the consequences of such a policy and on patient autonomy. In his *North Carolina Medical Journal* editorial, "Informed Consent for AIDS Testing," Dr. Halperin provides an excellent discussion of the moral and legal basis of informed consent for medical treatment.[13] Based on the distinction between expressed and implied consent and on the relevant case law, Dr. Halperin argues that consent is necessary for an HIV test on a conscious and competent patient.[14] Certainly, conducting a medical procedure, such as a blood test, without informed consent violates the patient's interest in self-determination, liberty, and bodily privacy. Bodily privacy has been construed consistently by the courts as a legally protected right, and violation of this right in medical practice constitutes, at least, the tort of battery. Recently in *Cruzan v. Director Missouri Department of Health*, the United States Supreme Court ruled that, "... a competent person has a constitutionally protected liberty interest in refusing unwanted medical treatment ..."[15]

> "A further consequence of elimination of the informed consent requirement for HIV testing is likely to be a reduced trust in the medical profession. Those who correctly or incorrectly believe themselves to be at risk for this disease may not seek medical care for any reason, including other illnesses or regular check-ups."

Against these arguments it might be claimed that these prima facie rights of self-determination, liberty, and bodily privacy may be overridden by considerations of public health and safety. Protecting the health and safety of medical personnel, specifically, may be cited as such an overriding consideration. Two criteria which should be employed, however, in assessing considerations held to override self-determination and liberty rights are the necessity and the effectiveness of the actions which would override those rights. The first of these may be measured here by the availability of other protective methods which would also reduce the risk of medical personnel contracting HIV. The strict use of universal precautions offers one alternative method. This alternative will reduce but will not totally eliminate accidental exposure to infected blood, a point which appears to lend support to the legislative change proposed.

However, even antibody testing cannot be totally effective in eliminating this risk for at least two reasons. First, there is a period of time, estimated at two to fourteen weeks, between contracting the virus and the development of antibodies to it.[16] During this time a person could be infected but no antibodies will be present in the blood, so an HIV test would be negative. This and other similar complications with HIV testing are discussed in the editorials noted above by Dr. Bartlett and Dr. Halperin. Second, knowing a surgical patient, for example, is HIV positive it is difficult to imagine what a surgeon could do to eliminate the risk of accidental exposure to the virus, short of refusing to operate. Since these exposures are just that, "accidental," no matter what extraordinary precautions are taken, accidents may always occur. It appears that the precautions which would be called for in this case are precisely the precautions the medical professional is presently advised to employ with all patients. However, whatever precautions are taken, total elimination of risk is simply not possible for the health care professional. At this point one might even question whether the total elimination of the risk of infectious disease, in general, is a realistic goal for the medical profession.

In comparing the patient's right to self-determination and bodily privacy with the protection of medical personnel from harm, it will also be important to consider the consequences of allowing patient autonomy to be overridden. The elimination of the informed consent requirement for HIV testing could seriously damage the patient-physician relationship. Specifically, it would place the physician in an adversarial position in regard to the patient, since in North Caro-

lina physicians must report a positive HIV test result to local and state health officials with the patient's name and locating information.[17] Those who seek medical care, then, not only may be tested without their consent, but risk losing patient-physician confidentiality if they do test positive.

A further consequence of elimination of the informed consent requirement for HIV testing is likely to be a reduced trust in the medical profession. Those who correctly or incorrectly believe themselves to be at risk for this disease may not seek medical care for any reason, including other illnesses or regular checkups. Those in the medical profession who support HIV testing without specific patient consent because they want to avoid treating those with HIV under any circumstances may welcome this consequence. However, the effects on society of a general reluctance to seek medical care could be devastating.

The Cost Factor

The cost of the complete series of tests needed to confirm an HIV infection should also be considered. While the ELISA is very inexpensive, at two to three dollars per test, the confirmatory Western Blot costs approximately $100 per test.[18] This raises an interesting set of questions. Will patients who refuse the test still be billed for the $106 charge if their ELISA tests are positive? Will physicians cover the cost of the tests when patients refuse their consent? Finally, who will be tested? If all patients are tested in low-prevalence areas, where there are few HIV infected persons, physicians may find that the number of HIV positive patients actually found may not justify the cost of testing everyone.

If only some patients are tested, this raises the question of how this type of determination will be made. Physicians who discriminate in this way may open themselves up to law suits. In addition, as HIV infection continues to move from certain groups in society into the general population, it will be increasingly difficult to determine who is "at risk." If specific guidelines are established based on risk factors, physicians must realize that patients who wish to avoid an HIV test may not be truthful about these factors in describing themselves.

In summary, the consequences on society and the patient-physician relationship of testing for HIV infection without specific patient consent would seem to be very damaging. Most importantly, this policy would not truly provide the protection the medical profession seeks. Even testing everyone who seeks medical care and refusing to treat and care for all those who test positive for this virus, medical professionals can never attain total freedom from the risk of contracting HIV.

Anonymous vs. Confidential Testing

Prior to September 1, 1991, all local health departments were required to provide free, anonymous testing for HIV with individual pre-and post-test counseling.[19] The counseling includes risk assessment, risk reduction guidelines and, if the test is positive, the legally mandated control measures for HIV.[20] Given the evident openness of the state health commissioners to further consideration of the final elimination of all anonymous testing by 1994, it is important to assess the moral arguments which might be given both for and against this policy change.

Several arguments could be used to support the elimination of anonymous HIV testing. The support from the medical community for this change may be based on the fact that if only confidential tests are available, everyone who tests positive will be reported by name and identifying information to local and state health departments. Although state law protects the confidentiality of this information, there are several exceptions, including release to a health care provider if the health department is providing care directly to the patient and consults with the provider or refers the patient to the provider.[21] Thus, with only confidential HIV testing available in the state, health care providers will be notified about patients' HIV infection if they are referred by the health department after receiving treatment there. Of course, this provides no protection against those individuals who have not been tested, those whose tests are negative but who are actually infected with HIV, and those who have tested positive but are not treated and then referred by the health department.

It may also be claimed that offering only confidential testing will facilitate "contact tracing." This is a process whereby the index patient (the patient who tests positive for HIV) lists the names and locating information for sexual or needle-sharing partners, and these people are contacted by HIV counselors. Without giving the index patient's name, the counselors notify the contacts that they have been exposed to HIV, counsel them, and encourage them to be tested.

This process is admittedly an important measure in the prevention of the spread of HIV. However, the name of the index patient is not necessary for the contact tracing process. All those who test positive for the virus are asked to provide their contacts' names and locating information for contact tracing, and these persons are then notified of their exposure. Since the names of index patients are never given to the contacts, these names are totally irrelevant to the process. It is also important to note that the whole process of contact tracing relies on the cooperation of the index patient. The patient must provide the names and there is no way to force the patient to do this.

The argument is sometimes made that eliminating anonymous testing is necessary for epidemiological surveillance of the virus. This is clearly not so. The spread of the disease can be tracked just as accurately based on information such as county of residence, sex, age, race, and risk factors. This information is recorded during pre-test counseling even in anonymous testing situations. The names and addresses of those who test positive for HIV are certainly not needed for this purpose.

It is also argued that if names and locating information for all those tested

for HIV are available, those who test positive but do not return for their results can be located and counseled. They can be given the control measures for HIV and asked to provide names and locating information for their contacts. However, if those who decide not to return for the results, for whatever reason, are later contacted and forced to receive this information, this seems dangerously close to mandatory testing. Certainly, everyone who seeks HIV testing should be counseled at the outset about their own behavior as well as risk reduction. While the control measures for those with HIV are legally mandated, it is, of course, impossible to enforce them since the actions mandated are primarily private ones. Finally, there is no way to force anyone to provide names and locating information for their contacts if they choose not to cooperate. Those who decide not to return for the results of their HIV test but are contacted and given this information against their will may be reluctant to cooperate by providing information about their contacts.

An additional purpose given for limiting HIV tests to those done confidentially is to allow for the treatment of individuals who are infected with the virus. It is claimed that if names are recorded those who test positive could be reported to their private physicians for treatment. If an infected individual has no private physician the individual could be located by the health department for follow-up care and referred for treatment. While early treatment for HIV infection is an important public health goal, its linkage with the elimination of anonymous testing is questionable. This argument implies that confidential testing is necessary for treatment, which is obviously not the case. Post-test counseling for HIV positive individuals in both anonymous and confidential settings should include information about the importance of early treatment with antiviral drugs and therapies for controlling symptoms and reducing opportunistic infections. Certainly those infected with HIV should be urged to consult with their own physicians or referred to an appropriate provider or clinic for care. However, unless confidential testing for HIV is combined with forced treatment, there is no guarantee that those identified as infected will seek or receive treatment. In fact, as pointed out by Dr. Bartlett, anonymous testing may even encourage the early detection of HIV infection and, thus, early treatment.[11]

"If the only way to be tested and counseled entails relinquishing one's privacy regarding sensitive medical information, the situation itself violates self-determination."

The argument that confidential testing leads to early treatment is often given additional support by the claim that HIV infection should be handled like other communicable diseases, employing confidential testing and reporting with the ultimate goal of requiring treatment to reduce the spread of the infection. If there were a cure for HIV infection, this would be a more convincing argument, since those who were infected could be forced to undergo treatment rendering them no longer infectious and thus reducing the spread of the virus. However, even those HIV patients who undergo treatment with the drugs and therapies presently available remain infectious. Certainly, those who test positive have the option and motivation to seek this kind of treatment through a physician or clinic. But should HIV infected patients be forced to undergo therapies which are very expensive, have serious side effects and, most importantly, do not cure the virus? If the purpose of recording and reporting names is to force those infected with an infectious disease to accept treatment so that the spread of the infection is stopped, this purpose simply does not apply to this infection at this time.

The arguments against the elimination of anonymous HIV testing center around patient-provider confidentiality and the consequences of violating this important component of the patient-provider relationship. When an individual seeks HIV testing and counseling at a public health department, a patient-provider relationship is established. It is essential that this be a relationship based on trust for risk assessment and risk reduction counseling to be at all effective. If information learned in the course of that relationship is shared with others, confidentiality is violated and that trust is destroyed. Presently, those who seek HIV testing at designated health departments have a choice between confidential testing, with the understanding that a positive test result and identifying information must be reported, and anonymous testing, in which their name is not part of the report. The elimination of anonymous testing would automatically place the person seeking testing in a situation in which confidentiality is not honored. The testing situation itself would violate the person's self-determination regarding who has this sensitive medical information. To be tested at all, then, would mean to lose control of this information.

Two objections might be made to this argument. First, rights to self-determination and privacy may be overridden for reasons of public health and safety. However, as shown earlier, reporting the names of those who test positive for HIV does not, by itself, protect public health. Names are not necessary for contact tracing, nor for epidemiologic studies. Without a cure, there is no reason to force treatment for the protection of public health. The only group in society who might be protected, although not very effectively, are medical professionals.

It may also be objected that those who seek HIV testing knowing that confidential testing is the only option do consent to have this information about them revealed, so no violation of their self-determination takes place. This objection points out the problem very clearly. If the only way to be tested and counseled entails relinquishing one's privacy regarding sensitive medical information, the situation itself violates self-determination. For those in our state who are

responsible enough to seek HIV testing and counseling, their privacy will automatically be violated.

Furthermore, the consequences of this policy for the spread of the virus could be devastating. The elimination of anonymous HIV testing may very well reduce the number of people who seek testing, thus reducing both the number of people who are counseled on a personal basis regarding risky behavior and the number of people who know they are infected. If people know that this information about them will be recorded somewhere in local and state health departments and in private physicians' offices, they may fear the possibility of others obtaining it, either accidentally or intentionally. As Dr. Bartlett points out regarding the various kinds of discrimination against those infected with HIV, "... HIV testing is different from other medical testing because the consequences are not purely medical."[11] Although state law mandates strict confidentiality of HIV-related information, there have been numerous reports throughout the country of leaked test results and discrimination in housing, educational and employment opportunities, and insurance, based on a person's infection with HIV. As long as society continues to react to those infected with HIV in these ways, the fear that HIV-related information may be leaked and fear of the resulting discrimination will deter many of those who perceive themselves at risk from seeking confidential testing.

It is important to recognize that without a cure or vaccine the only way to reduce the spread of this fatal infection is through education and counseling. Those who are not presently infected must be educated to protect themselves, and those who are infected must be educated and counseled to protect others. One-to-one counseling and education based on a personal risk assessment have been available at public health departments throughout the state, on an anonymous basis, with no threat of disclosure to others or accidental leakage of HIV-related information. Once these threats are in place, through the elimination of the option of anonymous testing, the chance to reach many at-risk individuals will be lost.

In summary, the elimination of anonymous testing for HIV clearly cannot serve to protect public health and safety—except in the case of medical personnel, whose protection will not be total—nor will it decrease the spread of HIV infection in society. On the contrary, the elimination of this relatively nonthreatening way to counsel and educate individuals about their behavior and their HIV status may even increase the spread of this fatal disease. ❑

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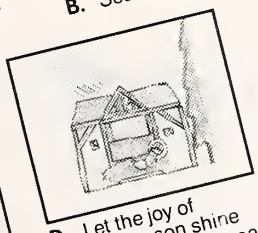
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"The Brown Bag" and Other Approaches to Decreasing Polypharmacy in the Elderly

David R. Thomas, M.D.

> All substances are poisons; there is none which is not a poison. The right dose differentiates a poison from a remedy. —Paracelsus (1493 - 1541)

Elderly persons account for about 25% of all drug expenditures in this country, although representing only 12% of the population. In ambulatory populations, 90% of elderly people take at least one medication and most take two or more. At least 40% of these drugs are nonprescription.[1] Almost 25% of hospitalized elderly experience an adverse drug reaction. Furthermore, between 3% and 10% of hospital admissions are directly attributed to adverse drug reactions.[2] In long-term-care facilities, two-thirds of the patients receive three or more drugs on a regular basis. Psychotropic drugs are given to 75% or more of long-term care residents, a pattern that has been suggested to indicate abuse.[3]

Benzodiazepines are the most commonly prescribed psychotropic drugs. Prescriptions for this class of drug accounted for six of the top 25 drugs in 1985, or one in every 20 prescriptions.[4] In 1987, 11% of the population had been prescribed a psychotropic drug in the previous 12 months.[5] In the elderly, benzodiazepines have been shown to increase the risk of hip fracture almost twofold,[6] and to cause a dose-dependent impairment in both cognitive and physical performance.[7]

Many of the problems in geriatric drug prescribing are unavoidable. Elderly patients have multiple illnesses that require multiple medications.[8] Drug interactions are almost inevitable. Compliance with medication regimens is a critical factor in treating chronic conditions, yet 25% to 50% of elderly patients fail to take medications properly.[9] Atypical presentation of disease may often complicate and confuse surveillance for adverse drug reactions. Separating adverse drug reactions from disease symptoms is difficult.

Altered pharmacodynamics and physiology make dosing problematic and drug reactions more frequent. In clinical practice, estimating creatine clearance is essential to adjusting the dose of renal excreted drugs. Alterations in renal function in the elderly are not accurately reflected in the serum creatinine concentration because the decreased ratio of lean muscle mass to body fat leads to low serum creatinine even with significant renal impairment. Predicting renal clearance of drugs from the serum creatinine requires a simple calculation:

$$\frac{(140 - \text{age in years}) \times \text{body weight in kilograms}}{72 \times \text{serum creatinine}}$$

In women this estimate is further reduced by 85% because of their lower muscle mass.[10] For commonly prescribed medications the regular use of this formula can significantly reduce overdosing.

Despite these difficulties in geriatric practice we can achieve safe and effective prescribing. The North Carolina State Medical Society Committee on Aging makes these recommendations for improved geriatric prescribing:

1 Take a careful history of drug use. The "Brown Bag" approach to drug history is helpful. The patient is asked to bring all drugs, prescribed and over-the-counter, to each office visit. Multiple drug sources and unused prescriptions are frequent reasons for drug interactions and unexplained side effects.
2 Go low. In general, use smaller doses in the elderly. A number of drugs, particularly those affecting the central nervous system, require smaller doses.
3 Go slow. Titrating the dose slowly while observing the patient's symptoms may avoid toxicity.
4 Keep things simple. Compliance is a common problem in patients with deteriorating memory or vision. Whenever possible, drug dosing should be once or twice daily. Al-

From the Committee on Aging, North Carolina Medical Society, and the Section on Internal Medicine & Gerontology, Wake Forest University, Winston-Salem 27157.

ternate day or complex schedules are particularly difficult to follow. Since color vision is usually well preserved, color labeling of containers is often useful.

5 Encourage the patient to recognize and report side effects. Many elderly persons grew up in an era when the medical adage was "if it's good for you, it has to be unpleasant." Side effects, even dangerous effects, are often under-reported.

6 Discontinue drugs at every opportunity. The treatment plan should be reviewed frequently, at least every three to six months. This is particularly true when several physicians are concurrently prescribing. Drugs that are no longer needed should be discontinued.

7 Always suspect drug toxicity. The frequency of drug reactions is correlated with the number of drugs taken. Drugs should always be the first suspected offender when new symptoms or unusual symptoms are reported. ❑

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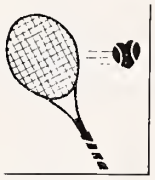
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VOLUME 52 / NUMBER 11 / NOVEMBER 1991

Medicare

UNDERSTANDING MEDICARE

Colleen Mahan

The Medicare program is now over 25 years old. On July 1, 1966, the government's plan to provide quality medical insurance protection to millions of elderly or disabled Americans began. In the beginning, Medicare was not the complex program it is today. Medicare continues to expand and grow. Changes are made every year in an effort to improve service and benefits to those enrolled in the program. Keeping up with the changes and understanding Medicare can often be difficult tasks. There are, however, many sources available to assist you.

Obtaining Information

Knowing what sources are available and utilizing them is one of the first steps in understanding Medicare. The U.S. Department of Health and Human Services publishes a Medicare handbook every year. The handbook is a handy reference to help you understand how the Medicare program works and to know what benefits are available. The handbooks are mailed to Medicare recipients annually. Extra copies may be obtained from local Social Security offices. Once you receive a handbook, it is a good idea to read it and become familiar with its contents. Keep the handbook in a convenient location for referral if questions arise later in the year.

If you have questions about whether you are eligible for Medicare or about how to enroll in Medicare, call your local Social Security office. You can also call Social Security if you have questions about your Medicare card or premium amounts. Social Security offices can replace your Medicare card if it becomes lost or destroyed. If you have questions about what Medicare covers or about your Medicare claims, call, write or visit your Medicare carrier.

Intermediaries and Carriers

The federal government contracts with private insurance organizations called intermediaries and carriers to process claims and make Medicare payments. Intermediaries handle claims submitted on your behalf by hospitals, skilled nursing facilities, home health agencies, hospices and other providers of services. You will not usually need to deal directly with intermediaries.

Ms. Mahan is a public relations representative for EQUICOR, Inc. Her address is PO Box 671, Nashville, TN 37202.

Carriers handle claims for services by doctors and other suppliers covered under Medicare's Part B (medical) program. Information in this newsletter pertains to Medicare Part B only. The carrier for North Carolina is EQUICOR, Inc. For assistance, you may call, write, or visit one of the EQUICOR Medicare offices. EQUICOR Medicare has two offices; one in Greensboro, North Carolina and one in Nashville, Tennessee. The office in Nashville processes claims, develops policies, conducts reviews and performs many other duties necessary in administering the Medicare program. The Greensboro office provides local access to North Carolina residents. Duties performed in that office include answering correspondence and telephone inquiries, public speaking, and policy development. They also assist the Nashville office in various aspects of claims processing. Call or visit the Greensboro office if you have a question or need assistance with Medicare (see contact information on page 570).

Contacting Your Carrier

When calling the Medicare carrier, have your Medicare number handy. You will be asked for your Medicare number in order for the telephone representative to help you. If inquiring about a particular claim, be sure to have details about the claim ready. The representative will usually ask for the date the service(s) was rendered, the name of the provider of the service, and the total charge for the service. Many calls are received by the telephone representatives each day. Having your information ready will help speed up your call. Your name and Medicare number are also important on written inquiries. If you are asking about a claim, give specific information about the claim so it can be identified easily.

A carrier can only discuss claims it has processed. Medicare claims are processed by the carrier in the state where the doctor or supplier resides. Therefore, if you see a doctor in state other than North Carolina, the claim will be processed by the carrier for that state. Each Explanation of Medicare Benefits form you receive will include the name, address, and phone number of the carrier that processed the claim. A list of the carriers for each state is also printed in the Medicare handbook.



At times, it may be necessary to visit EQUICOR Medicare for information or to discuss a problem. Representatives are available in the Greensboro office to assist you. They are located at One Triad Center, Suite 240, 7736 McCloud Road. The office is open for your assistance from 8:30am to 4:00pm. No appointments are necessary. To better serve you, EQUICOR Medicare asks that you avoid visiting or calling between the hours of 11:00am and 1:00pm, during lunch hours. The staff will be slightly smaller during those hours and may not be able to help you as quickly as they could during the rest of the day. Also, fewer people call or visit on Wednesday, Thursday, and Friday. You may receive quicker service on those days.

Processing a Claim

On an average, 60,000 Part B (medical) claims are received by EQUICOR Medicare every day. This number includes claims submitted on paper, as well as those submitted electronically. Despite these overwhelming numbers, the average paper claim reaches the claim processing units within two days of arrival. Electronic claims bypass these units.

Entering these claims into the computer processing system requires over 100 employees. They enter information exactly as it appears on the claims. For this reason, it is very important that the beneficiary's name, address, and Medicare number (Health Insurance Claim Number) are always accurate. To assist in filing claims, Medicare now requires all doctors, health professionals and suppliers to submit claims for their patients. It is up to you to be sure those submitting claims on your behalf always have your Medicare number as it appears on your card and your current address. When wrong information is placed on a claim, payment could be denied or even mailed to the wrong person. Your records are updated with each claim that is processed.

EQUICOR's computer system takes each claim through various steps before a final determination is made. Sometimes, it is necessary to request additional information from you or the provider of the service. If you get a letter asking for more information, provide the information as quickly as possible. If no response is received after approximately 30 days, the claim is denied. It can later be refiled with the needed information; however, this will further delay payment on the claim. Once the information is returned to the carrier within 30 days, the claim continues processing and the final determination can be made.

When a Medicare payment is issued, it will be sent to either you or the provider of the service based on the claim's assignment. Payment is sent to the provider of service on

assigned claims. Medicare normally pays 80% of the approved amount and you are responsible for the remaining 20% of the approved amount on an assigned claim. If the provider chooses not to accept assignment, you pay the provider in full for his/her service and the Medicare payment is sent to you. Supplemental insurance benefits could also be used to help pay for the service.

The out-of-pocket expense is reduced for you when your doctor or supplier accepts Medicare assignment. Some doctors and suppliers sign agreements to become participating providers in the Medicare program. These participating



providers accept assignment on all of their Medicare claims. The names and addresses of participating doctors and suppliers are published annually in a directory. You can get the directory for North Carolina free of charge by calling or writing EQUICOR Medicare. Also, this directory is available for you to look at in Social Security offices, state and area offices of the Administration on Aging, and most hospitals.

When Medicare payment is sent to the beneficiary, the check is attached to an Explanation of Medicare Benefits form. This is commonly known as an EOMB (or EOB). The EOMB shows the charges on the claim, who provided the service, how much was allowed, how much was paid, and other important details. Always keep EOMBs in your files. If you need to send an EOMB to another insurance company so they can make payment, make a copy to send. Keep the original EOMB for your records.

If payment is sent to the doctor or supplier, you receive an EOMB to let you know what action was taken. In special situations, Medicare pays 100% of the approved amount. No EOMB is mailed when the doctor or supplier accepts assignment in these situations, because the claims will be paid in full by Medicare. To help save postage and mailing costs, carriers must hold EOMBs for assigned claims and mail them in 30 day cycles. When your doctor or supplier receives a Medicare payment, remember that your EOMB will be mailed within 30 days. It is not necessary to call or write Medicare unless it has been over 30 days since the doctor or supplier received Medicare's payment. Payments and EOMBs are mailed daily to beneficiaries when the provider does not accept Medicare assignment. Copies of EOMBs can be ordered when necessary by calling or writing the EQUICOR Medicare office.

The Annual Deductible

Deductibles are common with all types of insurance. In Medicare Part B, the annual deductible is $100. You must pay the first $100 in approved charges for covered medical expenses. The deductible for each year ranges from January 1 through December 31. You need to meet this $100 deductible only once during the year.

To meet the deductible, it is not necessary to make any payment to the carrier. The deductible is applied from the first $100 approved on your claim(s). If the first claim to be processed is a large claim, the deductible may be met by that claim alone. However, it often takes several small claims to meet the deductible. Once the deductible has been met, Medicare payment may be made on your claims. You are responsible for paying the doctor or supplier for any amount applied to the deductible on a claim.

Noncovered Services

While Medicare pays for many of the health care expenses incurred by a beneficiary, it does not cover all of them. Therefore, it is important to know what Medicare does and does not pay for. Medicare medical insurance does not cover the following items and services:

- Routine or yearly physical examinations and tests directly related to such examinations (some screening pap smears and mammograms are covered),
- Most routine foot care,
- Most dental care, including dentures and preparing the mouth for dentures,
- Eyeglasses and examinations for prescribing or fitting eyeglasses (except after cataract surgery),
- Hearing aids and examinations for prescribing or fitting hearing aids,
- Immunizations (except pneumococcal vaccinations or immunizations required because of an injury or immediate risk of infection, and hepatitis B for certain persons at risk), and
- Cosmetic surgery unless it is needed because of accidental injury or to improve the function of a malformed part of the body.

The above list does not include all services that are noncovered. Many services are covered only under certain circumstances. For example, the only chiropractic service covered by Medicare is manual manipulation of the spine to correct a subluxation that can be demonstrated by x-ray. The Medicare handbook, available at Social Security offices, explains even more of the services and items that are not covered by Medicare.

Appealing a Decision

Anyone dissatisfied with the decision on a claim, either the patient or the provider of the service, may request a review or reconsideration. Requests for a review must be made within six months from the date on the Explanation of Medicare Benefits form. Only written requests can be accepted. The request does not have to be a formal letter; a brief note will suffice. Be sure to explain what claim(s) you want reviewed and why. It is also helpful to send a copy of your EOMB with the review request, although this is not required. You may also send extra information that you feel would be beneficial. Send written review requests for North Carolina claims to EQUICOR Medicare, PO Box 671, Nashville, TN 37202.

When the claim is reviewed, all of the information submitted with the claim and the review request are considered. The final decision is based on this information and in accordance with the Medicare laws and guidelines. Remember that the Medicare program was not designed to pay for all healthcare costs. Its purpose is to assist beneficiaries in paying for their health care. Even though you feel that a service or item should be covered, the reviewer may still have to deny coverage.

The reviewer sends a letter that explains the decision if no more payment can be made. If the doctor or supplier requested the review, the letter will be sent to him/her. When the reviewer finds that more payment can be made, no letter will be mailed. The EOMB which shows the additional payment on the adjusted claim will be notice of the review decision.

A hearing may be requested if you do not agree with the review decision. If you wish a hearing, the request must be made within six months of the date of the review notice. The amount of the benefits in question must be $100 or more and the amount in question is 80% of the difference between the amount billed and the amount previously allowed. To meet the limit, you may combine claims that have been reviewed and denied within the past six months. Like reviews, hearings must also be requested in writing to the carrier.

Lost or Misplaced Medicare Checks

The Medicare payment you receive should be used to help pay your doctor or supplier. Any time you receive a Medicare check, always cash or deposit it as soon as possible. Medicare checks are only valid for six months. It is also a good idea to never endorse a Medicare check and put it in the mail. Once you endorse it, the check may be cashed by anyone.

At times, a Medicare check may become lost, accidentally destroyed or never received at all. If you are aware of a missing Medicare check, call or write the Medicare carrier that issued the check. A stop payment affidavit will be mailed to you. It will be necessary for you to indicate on the affidavit that the check was either lost, destroyed or never received. Always be sure to include your signature and address on the affidavit before returning it to the Medicare carrier.

A stop payment affidavit does not have to be returned to Medicare if the check was found after you called or wrote. Cash or deposit the check and disregard the affidavit. You do not need to call or write to explain that you found the check. No action will be taken by the carrier unless a signed affidavit is returned to them.

Placing a stop payment on a check and issuing a new check is sometimes a slow process. Generally, four to six weeks should be allowed before you can expect to receive a response. The carrier must first research records to see if your check is outstanding or if it had ever been cashed. If the check is still outstanding, the carrier must wait until the bank completes stop payment procedures before a replacement check can be issued. If the carrier finds the original check was cashed, you will be sent a letter telling you of these findings. A copy of the cancelled check showing your endorsement may be requested if you find it necessary.

Medicare checks are only valid for six months. After six months, the check is called a "stale-dated" check and it can no longer be cashed. If you find a check that is more than six months old, return it to the carrier with a note that briefly explains that the check was previously misplaced and has recently been located. If a replacement check has not been issued previously, the carrier will be able to reissue the check.

Fraud and Abuse

If you have reason to believe that a provider of healthcare services is performing unnecessary or inappropriate services or is billing for services you did not receive, you should report this to the Medicare carrier. Errors by billing personnel sometimes result in billing you for services rendered to another patient. Educational contacts by our office can usually resolve these situations.

If the Medicare carrier does not respond adequately to your report of Medicare fraud or abuse, you should call the Department of Health and Human Services, Office of the Inspector General. Their toll free telephone number is (800) 368-5779. Call or write your Medicare carrier first for faster action. Do not call the Inspector General toll free number for Medicare policy questions or questions about delayed claims or payments.

To contact your Medicare carrier, write EQUICOR Medicare, PO Box 671, Nashville, TN 37202; or call (800) 672-3071 (beneficiaries only) or (919) 665-0348 (Greensboro area and out-of-state). ❑

I Live By the Color of Thin Plastic Strips

Managing a Case of Hard-To-Control Diabetes

Margareta Claesson, Ph.D.

You can find small white plastic strips almost anywhere in my house. They are about three inches long, with two small colored bands at one end. You can spot strips on the kitchen counter, neatly lined up in a row. Sometimes you'll find them on the dining room table, two or more lying side by side. You'll also find them on my desk, and of course on my bedside table and in the bathroom. They are at the bottom of my handbag, old useless ones. My husband finds them on the floor, on the basement stairs or at the computer when he sits down to work in the evening.

I try to keep track of these tiny strips. I really make an effort to keep track of them. They convey information that I couldn't manage without. Besides, I must be careful not to drop them down the kitchen sink where they could get stuck and plug the drain. We have had problems with the plumbing before, and it must not happen again.

The other day a friend noticed one of my strips on the floor of my car. She wondered what it was and why it was there, and I told her that it was an old blood sugar test strip which I must have lost. I explained that I measure my blood sugar eight to ten times a day, and also before I go out driving, to be sure that I won't have a low blood sugar level while I am on the road.

It has taken a lot of hard and persistent work to learn that I must monitor my blood sugar and how I can use the information from the blood tests to manage my diabetes.

One big problem is that I do not always sense when my blood sugar is too high or too low. Within half an hour it can change drastically, and I must know so that I can do something about it. If it drops too low, I must quickly take a glucose tablet. If I don't and the blood sugar drops further I may be in danger of going into a coma. Even with a moderately low blood sugar, my whole system may be out of balance and fluctuate wildly for hours or days between too high and too low blood sugar levels.

If it is too high, I am sluggish and feel nauseous. There may be several reasons for elevated blood sugar. I may have injected the insulin in a place where the absorption is delayed, which makes the blood sugar rise. I may have eaten more than I should, or I may have had less exercise than usual. The opposite can also happen, for example, the absorption of insulin may be too rapid so that the blood sugar level drops. Therefore, the plastic strips, which help me monitor my blood sugar, are my constant companions.

I measure my blood sugar about every two hours, always before meals, and usually twice during the night. Sometimes my blood sugar is so irregular that I have to check it every hour. No wonder that there are so many strips around. They are the most visible part of a routine that structures my daily life—a routine that I have slowly and carefully developed over the last ten years. It has taken this long, for the procedures I now rely on did not always seem so obvious.

Medical Comment

Taking care of diabetes is an arduous and time-consuming process. There are no "holidays" from the discipline of diet, exercise and insulin. We might paraphrase Lawrence Weed by saying that the "sickest pancreas is smarter than the smartest doctors." Given the present fiscal realities of reimbursement for professional health care, it is not feasible that anyone other than the patient with diabetes will be able to invest the time and attention needed to compensate for failure of the pancreatic islet cells.

Since the intact pancreas monitors and responds continually to changes in blood sugar concentration, it would appear reasonable that frequent measurement of blood sugar values (coupled with appropriate adjustments in diabetes care plans) would improve the quality of diabetes control. Margareta Claesson has recorded here her experience with a regimen that might strike the casual observer as excessive or unnecessary. Her testimony is that she feels better and that her symptoms are less severe when she exercises such tight control (not to mention the hope for fewer "diabetic complications" in her future). Not all patients with diabetes will need or achieve such a program. But her success emphasizes that there is no substitute for careful and knowledgeable attention by the patient to all aspects of diabetes care.

—Francis A. Neelon, M.D.
Department of Medicine, Duke University Medical Center

I go to all this trouble because 13 years ago I was profoundly frightened. One day I had a hemorrhage in my right eye. At that time my doctor gently but persuasively started me on a course of self-monitoring. I was afraid of becoming totally blind and this motivated me to take more responsibility for my own care. Soon I also found that I felt much better when I could keep my blood sugar more normal. I was more energetic, in better mood, and much more alert.

Because I follow this regimen of frequent blood sugar tests and have learned to pay close attention, my health has improved markedly. An objective measure is the hemoglobin A_1C test, which my doctor orders every three or four months when I see him. For most of the past six years my results have been within the normal range for people without diabetes.

In addition, my ophthalmologist tells me that my good eye now looks healthier than it did 13 years ago. At that time he too worried about blindness and suggested laser treatment. There was no need for this treatment and today this eye shows few effects of my 34 years of diabetes. Is this due to better blood glucose control? It certainly looks that way.

I am lucky! My husband gets out of bed early in the morning to wake me up with a cup of hot tea at 6 a.m. An ordinary day in our house begins with drinking tea and talking about the day ahead. Before anything else, I must measure my blood sugar so that I can plan my insulin schedule and activities for the day. For the last five years I have taken four insulin injections each day. It is easier for me to keep my blood sugar levels nearly normal throughout the 24 hours by injecting regular (short acting) insulin before breakfast, lunch, and dinner and NPH (intermediate acting) insulin at bedtime.

Some mornings I wake up quickly and feel well and alert. The little vial with the test strips should be at my bedside. If it isn't, my husband looks for it in the bathroom, assuming that I have forgotten it there during the night. I take the vial and go about doing the finger prick to get a drop of blood. Other days I am slow, my joints are stiff, my mind is unfocused, and it takes longer before I am in control of my brain, hands, and fingers. These are cues that make me suspect that my blood sugar will be high and that I may have ketones in the urine as well.

In past years I didn't always check my urine for ketones in the morning, but I have learned that this information is important. Ketones are chemicals that the body produces when the diabetes is out of control. They are excreted in the urine and I can easily test for them with a test strip, which looks much like the blood sugar strips. I put a few drops of urine on the strip, and after two minutes I read the color.

I know from experience that if the strip shows that I have ketones in the urine, I need more insulin than usual. I also know that it will take longer to return to normal blood sugar levels, and that I will have a hard time doing any serious work for perhaps three or four hours. The ketone test is a very helpful indicator that tells me that something is wrong and that I must do something about it.

But let's return to the blood sugar test. Drawing a drop of blood is now a routine—almost as much of a routine as brushing my teeth and washing my face—but I have arrived at the method I use through years of trial and attention to detail. For example, there are many machines on the market that test blood sugar, but I have not yet found one I like, and I function well without. By comparing my own test readings with the hospital tests at each office visit, my doctor and I have found that my visual readings are as accurate as are the readings of the machines.

In the morning I sit up in bed and take a sip of tea, pick up the vial with the test strips, and take out a little lancet from the tiny zip-lock plastic bag that I have fastened to the side of the vial with a rubber band. I can use the same lancet several times by keeping it in the bag. I bought a batch of these bags from a gourmet store where they are used to weigh out small amounts of spices for customers. Actually, I keep a supply of three of four lancets in the little bag so that I can take a new lancet whenever the old seems dull or gets dropped and contaminated. When I first started doing these finger pricks I used to wash my hands or use an alcohol swab to clean off the finger, but I do it differently now. Wet hands take time and effort to wipe totally dry. Since I open the vial eight or ten times a day and stick in a finger to fish out a strip, a lot of moisture could get in if my hands were still moist. Also, repeated use of alcohol toughens the skin and dries it out. Instead, I give the finger a lick with my tongue and wipe it off on a paper tissue. (By the way, I do continue to sterilize the site of insulin injection.)

"I learned to lick my finger several years ago when we were in California. We were helping with the wine harvest..."

I learned to lick my finger several years ago when we were in California. We were helping with the wine harvest, and I sat under a grape vine, feeling weak, and thinking that my blood sugar perhaps was low. I wanted to measure it, but my hands were dirty and sticky with grape juice (which would have rendered the test invalid because of the glucose in the grape juice). I had no way of washing far out in the vineyard and I looked unhappily at my husband. He is a physiologist and he simply said: "Lick your finger, that is as good as any washing." Later, one of his colleagues told me that saliva contains immunoglobulin A, which may help protect the pinprick from infection. Also, there is a small amount of epidermal growth factor in the saliva, which he said may speed up the healing of the wound, but my husband doesn't believe this makes much difference.

With the many blood tests each day I have developed a system for which finger to prick. In everyday life, the thumb and index finger are needed more than the others, and people who are not used to pricking their fingers are usually unaware that the thumb and index finger also are more sensitive to pain. Consequently it is better to use the other fingers.

Many of us vividly recall the sting when a nurse does a finger prick on the ball of the finger. It hurts because there are more nerve endings on the ball than on the side of the fingertip. Besides, along the sides the capillaries run closer to the surface. Therefore, it makes sense to stick the lancet at the side where one feels less pain and draws blood more readily.

There are many automatic spring-loaded finger pricking devices on the market, advertised as being painless. Many people with diabetes seem to like them, but I don't think they are painless and prefer to control the lancet myself.

For the first blood test of the day I start by using one side of the third finger; I take the next sample from the other side of the same finger. Then, as the day goes on, I work my way down from side to side to the fourth and fifth fingers of one hand, and then I switch to the fingers on the other hand.

I am careful to rotate the sites, but nevertheless I have developed calluses. The skin on my fingertips is tough and leathery, and I look with envy at other people's soft, smooth fingers. But the pricking must continue.

As soon as I have pricked the finger, I press out a droplet of blood. If my hands are cold, there may be insufficient blood flow, and I hold the finger in my mouth for a minute or two to warm it before I prick again. Then I put the lancet back in the plastic bag, open the vial, fish out one of the plastic strips, and close the vial—all the while trying to keep the drop of blood on my finger from running off. I hold the test strip next to the drop and let it run onto the small cream-colored bands. Then I quickly look at my bedside clock, and after one minute I blot off the blood from the test strip with paper tissue. Again I wait one minute before I check the color chart on the side of the vial. The colors range in pairs from very pale cream and light blue, indicating low blood sugar, to dark green and intense blue, indicating high blood sugar. Often I can guess what the color will be by how I feel, but sometimes I get a surprise.

I have noticed that when my blood turns the two bands on the plastic strip either very pale or very dark, my brain doesn't function well and I can't concentrate. Realizing that there is a connection between the abnormal blood sugar and not being able to think straight has made me feel much less negative about myself.

I have chosen the particular brand of test strip with care. One of the good aspects of the strips I use is that the test gives the same result, even if the blood stays on ten or twenty seconds longer than it should. I have tried other brands, but have found that they are more dependent on precise timing. Another advantage of the strips I use is that I don't have to be too careful about exactly how I blot off the blood, a detail to be thankful for when my blood sugar is low and my coordination poor. I have tried one brand where it was essential to blot only once and very softly, or risk seeing the indicator band partially stick to the tissue and the color become illegible. My brand (Chemstrips®) is tougher and retains the color for days, which many other brands do not. Because the strips keep their color so well, I often line them up in a neat row so that I can see at a glance how my blood sugar has changed during the day, or even from day to day.

But I don't rely solely on the strips lying around. In the bedroom I have a big brown ring binder where I write down the results of all these tests. This log now contains more than a hundred pages of information, the records of nearly a decade of finger pricking. I must confess that sometimes I get tired of doing all the recording, so almost every page has a few empty lines. However, I believe in this information and its value for managing my diabetes, so I keep on with it.

Some of the newer blood glucose machines have a built-in computer memory that helps the user by remembering the readings. But the readings do not give the whole picture. In addition to the blood sugar results, I make notes about other variables I want to keep track of, such as insulin doses, exercise, colds, changes in my diet, my monthly periods, and so on.

"I do all of this work not only because my diabetes is hard to control, but also because I feel so much better."

But merely writing down the results isn't much help. The important part is to use the log as the basis for decisions that my doctor and I make. On each visit to my doctor's office I take my log book with me. We review the last couple of months' worth of information and discuss changes I should make. Alone at home I do the fine tuning, making the hourly, daily, and weekly adjustments.

I do all of this work not only because my diabetes is hard to control, but also because I feel so much better. The information and the patterns that the strips and the log reveal help me monitor my blood sugar and enable me to regulate my insulin doses. The blood sugar balance is never perfect, and there are always adjustments to make. Without the built-in glucose sensor of a normally functioning body, I am doing my best to keep up with my ever changing blood sugar. Although the test strips have become a familiar routine, using the results is complex and demanding. I think of the colored strips lined up everywhere in the house as symbols of the life I live. Without these strips I wouldn't be the happy, healthy, and productive person I am. ❑

Wrinkles

William M. Hendricks, M.D.

Wrinkles are caused by the combined effects of sun exposure, aging, gravity, heredity, and facial expressions on your skin. Sunlight—more than any other factor—causes premature aging of the skin.

How Can I Prevent Wrinkles?

There are six things that you can do to prevent wrinkles. They are listed in increasing order of desperation:

1 Stay out of the sun or use a good sunscreen with a sun protection factor (SPF) of 15 or more (such as Presun, Sundown, Supershade, or Total Eclipse) when you are outside. Wear sunglasses along with a hat to prevent "squint lines."

2 Quit smoking. Smoking has been associated with premature wrinkling.

"Forget about spending hundreds of dollars on expensive wrinkle creams and hundreds of hours on facial exercises. They don't work!"

3 Forget about spending hundreds of dollars on expensive wrinkle creams and hundreds of hours on facial exercises. They don't work! Instead, apply an emollient cream to your skin immediately after you wash your face with warm water and a mild soap. It will help flatten skin scales and hydrate your skin making wrinkles less noticeable. These creams, however, do not prevent wrinkles. Neither do professional methods of applying makeups or creams. Cosmetics, on the other hand, will help hide wrinkles.

4 Try to smile, frown, laugh, squint, grimace, scowl, pucker, chew and talk as little as possible. Your facial expressions etch their marks on your skin.

5 Pick your parents carefully. Heredity is the second most important factor responsible for a "youthful-appearing skin."

6 Die at an early age. Otherwise, time will catch up with you—your skin will lose its underlying fat, sag under the forces of gravity, and relinquish its ability to retain moisture. *Sic transit gloria mundi.*

Treatment

Wrinkles may be removed in a number of different ways. Dermabrasion, chemical peels, collagen and fibrin foam injections, and various surgical procedures may be used to help improve the appearance of your skin. Tretinoin (Retin-A) also has been used with success in some people. ❑

From the Asheboro Dermatology Clinic, 407 S. Cox St., Asheboro 27203-5496.

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The Difficulty of Deciding Why Children Die

A Review and Some Recommendations

Andrea Gravatt, M.D., F.A.A.P., and Cynthia G. Shuford

Since its first description by Dr. Caffey in 1946, our understanding of what constitutes child abuse has changed from physical abuse to include sexual abuse, emotional abuse and various forms of neglect.[1] The number of cases of child abuse and neglect exceeds 2.2 million per year nationally.[2] Many experts feel that the true incidence of child abuse and neglect is even higher, a result of underreporting. Child homicide has been clearly described in the literature,[3] and accounts for more than 4,000 deaths per year nationally.[4] In the state of North Carolina, Governor James Martin issued an executive order in May, 1991, establishing community child protection teams to review defined cases of child abuse and neglect, including child fatalities.[5]

We share the concern of Marcia Herman-Giddens that a complete and accurate recording of deaths is essential if we are to prevent child maltreatment and deaths.[6] During our review of child deaths in Buncombe County from January 1989 to May 1991 we identified multiple problems in how these vital data are recorded. In this paper, we recount those problems and make recommendations that we think will improve the recording of such vital information.

From the Western North Carolina Regional Child Abuse Center, Inc., P.O. Box 5861, Asheville 28813. Ms. Shuford is a student intern from UNC Asheville.

Procedures

We reviewed every death certificate filed at Buncombe County Courthouse dated from January 1989 to May 1991. Those of children aged from viable birth through 18 were pulled for in-depth review. There were 141 subjects in this study group. Data abstracted from the death certificate included: child's name; date of birth; date of death; cause of death; and physician who signed the death certificate. In addition, we reviewed the medical records, including autopsy reports, emergency room reports, law enforcement records, and Department of Motor Vehicles records pertinent to each case.

Causes of Child Death

The results of the medical review were tabulated as shown in the table. Medical causes accounted for 59% of all childhood deaths during the study period. These included cases of prematurity, meningitis, pneumonia, congenital defects, etc. Prematurity (defined as infants greater than 24 weeks' but less than 37 weeks' gestation) accounted for almost 40% of the medical deaths. The remaining 41% of child deaths were attributed to accidents, sudden infant death syndrome (SIDS), homicide, or suicide. There were no deaths attributed to burns.

We did not find that failure to gain access or delay in seeking medical care was a factor in the 36% of deaths due to medical causes. Quality of care review was beyond the scope of this study and, therefore, the percentage of preventable medical deaths due to suboptimal medical care was not assessed; but since all non-DOA (dead on arrival) child deaths that occur in Buncombe County occur at Mission Hospital, the fact that very few cases fail the stringent quality assurance standards already in place at our hospital speaks to the adequacy of medical care rendered.

The 64% of deaths attributed to nonmedical causes and prematurity we felt to be potentially preventable. Deaths due to prematurity would be most likely to be immediately reduced by prevention programs. There will always be a percentage of child deaths due to prematurity, SIDS, accidents, homicide and suicide that even in the most ideal system cannot be prevented by education and intervention programs. But any improvement would have a considerable impact on these statistics.

For example, in our study children were five times more likely to die in motor vehicle accidents in which seatbelts were not used than in those where seatbelts were used. Our data support the use of seatbelts to reduce deaths and imply that education and law enforcement can favorably impact death rates.

Table
Deaths of Children in Buncombe County, January 1989-May 1991

Cause of Death		N	Percent
Medical	Premature	32	23
	Other	51	36
	Total	83	59
Accident	Motor vehicle Use of seatbelt in 4 cases Alcohol intoxication involved in 4 cases	20	14
	Pedestrian	4	3
	Bicycle	4	3
	Gunshot wound	2	1
	Drowning	3	2
	Suffocation	1	1
	Strangulation	2	1
	Asphyxia (choking)	1	1
	Total	37	27
Sudden Infant Death Syndrome*		12	8
Homicide	Gunshot wound	3	2
	Suffocation	1	1
	Battered Child	2	1
	Total	6	4
Suicide	Gunshot Wound	2	1
	Carbon monoxide poisoning	1	1
	Total	3	2
Total		141	100

* Two cases are classified as SIDS on the basis of the death certificate, but there are serious questions about the cause of death (please see text).

Recommendations regarding the nature of community education and prevention programs are difficult to make with authority because inconsistencies in agency data recording and death classification weaken the conclusions we can draw from our data. We describe below the problems we identified in gathering accurate data and our recommendations to correct these problems.

Problems Encountered and Solutions Proposed

During the process of data gathering and analysis we found problems that fell into three categories: central registry inaccuracies; hospital medical record inconsistencies; and state and county record inconsistencies.

I. Central Registry Inaccuracies

We attempted to identify whether children whose deaths were attributed to SIDS or homicide had previously been known to the Department of Social Services (DSS). The Central Registry is the state agency that records cases in which there has been DSS involvement. Unfortunately, the Registry had variable ways of recording a child's name; the child could be listed by his or her proper name or by a nickname. Without knowing all of the possible name entries, sometimes a case could not be found.

> **Recommendation**: Subsequent to the time of our study, the system began to undergo change. Attempts are made to use only the child's legal name and date of birth. We applaud these changes since we feel that access to accurate information is essential to any study that relates previous Department of Social Services referrals to subsequent child fatalities.

We found discrepancies in dates of birth and death between some medical records and death certificates. In some cases the child's name on the medical record was not identical to that on the death certificate. This was particularly a problem with premature infants who might be listed in hospital records under the maternal name, while on the death certificate the child's given or paternal name was recorded. In one case the spelling of the first name differed between the death certificate and the medical record.

> **Recommendation:** Better, more rapid record retrieval depends on accurate recording of name, date of birth, and date of death. A consistent means of recording the child's legal last name, and avoiding the use of "baby girl" and "baby boy," would facilitate accurate data retrieval.

II. Hospital Medical Record Inconsistencies

We identified multiple instances of inconsistency in the hospital record system. For example, children who died in the emergency room (ER) or who were DOA did not have a medical record sheet included in the hospital chart; the outpatient ER records or autopsy records frequently were not included in the hospital record. In most instances, a child presenting DOA simply had a name recorded in an ER logbook. Medical information

regarding these cases was retrieved from the Department of the Chief Medical Examiner, the law enforcement offices, and from loose papers of ER visits.

> **Recommendation:** We feel that at least a basic information sheet should become a part of the medical record. This would be especially important in cases of child maltreatment which may show a series of ER visits and hospitalizations culminating in a child returning DOA. The present system offers no direct clue about such a sequence.

During chart review of deaths attributed to prematurity, it was difficult to determine in some cases which infants met our age criteria. Medical records listed only presumed gestational age with no birth weight. We conducted an extensive comparison of labor and delivery logs and medical records to ensure that we counted only viable babies in this study and that non-viable infants were uniformly excluded. We could not use weight, since this information was not consistently recorded.

> **Recommendation:** Accurate recording of birth weights and gestational age are critical to the assessment of trends in prematurity as well as other health care and medical issues. These data should be uniformly recorded in the medical chart.

III. State and County Record Inconsistencies

The death certificate is filed only in the county where the person died. As a result, if a child dies outside the county of residence, no record of the child's death returns to the home county. Children who are critically ill are often transferred to an institution outside the county. For example, deaths from burn injuries appear deceptively low as recorded in Buncombe County because most of these deaths occur after transfer to institutions outside the county. A similar problem may relate to inflated statistics on deaths due to prematurity in Buncombe County, since premature infants may be transferred here for care from other counties in Western North Carolina. Preventable deaths and the need for community education regarding particular health problems may go unrecognized because of this separation of information.

> **Recommendation:** We recommend that official notification of death be recorded for the child's county of residence.

When we reviewed the death certificates of children who died in long-term care institutions, we noted that the original reason for institutionalization of these children was not always apparent. Some of the children were institutionalized because of child maltreatment, congenital abnormalities, prematurity, etc. Had the child's death been attributed to the original condition that led to institutionalization, there would have been a greater percentage of deaths ascribed to nonmedical rather than medical causes.

> **Recommendation:** The original reason for institutionalization should be clearly recorded on the death certificate in addition to the "medical causes" of death.

Three factors contribute to accidental and nonaccidental death involving motor vehicles, bicycles and pedestrians: alcohol abuse, failure to use seatbelt restraints, and failure to use protective helmets. Records do not uniformly indicate when these factors are involved. The Department of Motor Vehicles was helpful in providing data not available on medical or law enforcement records. Systematic recording of such information would help in designing educational programs and measuring their impact. Furthermore, counties with higher than average rates of child fatalities due to lack of seatbelt restraint use, for example, can be identified.

> **Recommendation:** Information about alcohol, seatbelt and helmet use (or nonuse) needs to be clearly noted on medical and law enforcement records.

Crack and cocaine are causes of intrauterine fetal demise and prematurity.[7] Furthermore, the passive inhalation of environmental crack vapor by infants can cause sudden death which may be mistaken for SIDS.[8] During our chart review for prematurity, we found no consistent notation of maternal use or nonuse of drugs. The authors recognize the difficulty in gathering accurate information regarding illegal substance use, but we feel that some information would be preferable to none.

Street drug screening for all patients arriving in labor or for delivery will provide data regarding the frequency of recent drug use, but it will still miss those who used drugs earlier in pregnancy. In addition, personnel first arriving at the scene of a child's death, particularly SIDS deaths, do not record the presence of crack odor or of drug vials. Possibly they do not realize the significance of this information. Dr. Mirchandano[9] indicated that findings at the crime scene, as well as toxicological data, can clarify whether a death should be attributed to cocaine or to SIDS. In North Carolina the Child Medical Examiner does not uniformly test for cocaine in SIDS cases, but does test for alcohol. It is our hypothesis that statistics related to SIDS deaths would be improved if complete toxicological data were available.

> **Recommendation:** Drug screening of pregnant women and of potential cases of SIDS death for the presence of street drugs would provide valuable information as to the magnitude of the problem in our community. We also recommend educating teenagers regarding the danger of drug use during and after pregnancy.

SIDS is an important medical concern and a significant cause of psychological distress in families. Accurate recording of SIDS deaths is essential to understanding SIDS trends. We do not

want to include as SIDS deaths those due to homicide or drug-related causes.

Deaths ascribed to SIDS accounted for 8% of child fatalities in our study. However, we noted that one death recorded as SIDS on the death certificate may have been secondary to alcohol poisoning as noted on the Medical Examiner report. Discussion with the Child Medical Examiner's office clarified that alcohol poisoning was a significant contributing factor in the child's death, but the death certificate had not been corrected one year later. (For this study, this case was recorded as SIDS solely because the death certificate noted it as such.) During our review we found another case identified as SIDS on the death certificate, but autopsy revealed alcohol poisoning sufficient to cause death. Since this case fell outside the bounds of our study period, we did not include it in our statistical analysis. Finally, another death attributed to SIDS as recorded on the death certificate was actually due to aspiration of gastric contents as noted in the Medical Examiner report. (Again, we recorded this case as SIDS solely because the death certificate noted it as such.) The death certificate was amended after our study period had ended, but the SIDS registry records remained incorrect.

Recommendation: Since alcohol ingestion with its potentially fatal hypoglycemic effects[9] can be mistaken for SIDS, we recommend that Child Death Review Teams include SIDS deaths in their review processes, and that all deaths not ultimately attributable to SIDS be correctly recorded in the appropriate registries.

Conclusion

In carrying out our study, we identified multiple sources of inaccuracies in recorded data and of difficulties in retrieving data. These inaccuracies can in turn lead to erroneous conclusions about causes of and trends in child death. We hope that our recommendations will help correct these inaccuracies, allowing appropriate child death prevention programs to be established. Only then can we hope to reduce these preventable causes of child death in our own and other communities. ❑

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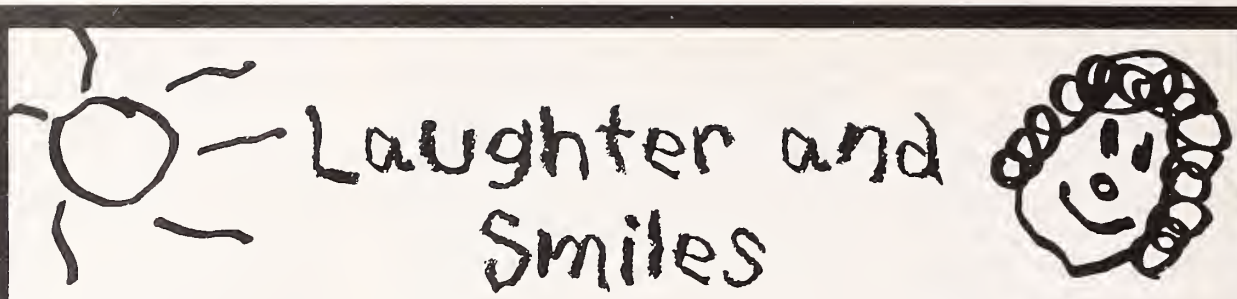
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Achilles and His Evil Squeeze

Colchicine Poisoning

Ronald B. Mack, M.D.

In ancient times the Asian country Colchis lay at the eastern end of the Black Sea. It was here that the Golden Fleece, sought by Jason and the Argonauts, was found.[1] Colchis was also the birthplace of the evil, vengeful prophesier Medea, the mother of all vengeful women. For her enemies, it was the worst of times.

Medea was the daughter of the king of Colchis. She married Jason and helped him defeat his enemies and find the Golden Fleece.[2] Jason, however, had an eye for the ladies. He divorced the sorceress Medea and wooed another lovely. Our vengeful lady killed this second beauty by sending her a wedding gift, a gown that burst into flame when she put it on for the wedding. Medea also killed the twins she and Jason had conceived.[1,2] Medea was a famous poisoner and often used plants of the lily family to relocate her victims, permanently. It is from this plant that the medication colchicine was obtained. After her death she was transported to the Elysian Fields, home of the Blessed, and became the consort of Achilles.[2] (Hey, that's not fair.)

Dr. Mack is chairman of the Committee on Drug Abuse and Pharmacy of the North Carolina Medical Society and Associate Professor of Pediatrics, Bowman Gray School of Medicine, Winston-Salem 27103.

Colchicine is an alkaloid that can be obtained from two members of the lily family—the autumn crocus and the glory lily.[3] The tubers of the glory lily resemble those of the sweet potato and have been reported to cause poisoning upon consumption. Ingestion of these plants can make you very ill indeed but it requires a fairly large volume. Death, however, has been reported from ingestion of this particular flora. Colchicine tablet overdose can have very disastrous results, indeed, even with relatively small amounts.

For our purposes the plant most likely to cause colchicine poisoning,[4] if ingested in quantity, is the *Colchicum autumnale*, AKA the autumn or fall crocus, the Meadow saffron, Mysteria, Wonder bulb and Naked ladies. It is a member of the lily family and is cultivated for the long, tubular, purple or white flowers, which emerge from the underground bulb. Colchicum species are in cultivation only; they are also relatively popular house plants. *C. autumnale* is a commercial source for colchicine.

All parts of the plant contain the alkaloid colchicine. The flowers contain approximately 0.1% colchicine, the seeds up to 0.8% and the corm up to 0.6%.[5] (What is a corm, you ask? It is the underground, swollen, hard part of the stem. It is the bulb of the crocus and of the gladiolus.) The amount of colchicine found in two to three *C. autumnale* seeds, or one-half of a flower, has resulted in death. The highest concentration of this potential toxin is found in this plant in the summer months.

Apparently the poisonous potential of this plant was known to Dioscorides,[6] a famous epigrammatist of the late 3rd Century B.C. whose work provides us with word pictures of life in Egypt, popular entertainment and literary history.[7] Preparations of this plant material for people suffering from joint pain was not recommended until the 6th Century A.D.[6] It has been alleged that colchicum was first introduced as an anti-gout medication in 1763. Benjamin Franklin, a gout sufferer, is thought to have introduced this therapy in the United States. The alkaloid colchicine was first isolated from colchicum in 1820, by Pellstier and Caventou.[5,6]

Colchicine is used medically in the treatment of gouty arthritis but has also been proven effective in the management of acute Familial Mediterranean Fever.[8] You say you have not seen a case of acute Familial Mediterranean Fever lately—for shame, you must be missing the diagnosis. This latter disease is also known as Familial Paroxysmal Polyserositis. This it to be distinguished from Acute Mediterranean Fever which is a disease of cattle, swine and goats, caused by Brucella.

In the treatment of gout, its most common use, colchicine reduces the phagocytosis of urate crystals by leukocytes. It does so by inhibiting the poly-

merization of tubulin, a structural protein necessary for motility.[5,8] Thus, this drug has an antimitotic effect which causes an arrest in cell division in the metaphase stage. Those cells that are the most affected are those with the highest turnover rate, e.g., the bone marrow and the epithelial cells of the gastrointestinal tract. The suppression of cell division is maximal at about 10 hours post ingestion.

Colchicine is rapidly absorbed by the gastrointestinal tract with peak plasma levels occurring within 0.5 to 2 hours.[9] Overdoses can prolong the rate of absorption because of the antimitotic effect on the gastrointestinal epithelium. This drug has a short half-life, T $^1/_2$ is 20 minutes, but can remain in the tissues for a period of up to 10 days.[10] Almost 50% of circulating colchicine is bound to plasma protein. The volume of distribution (VD) is 2.2 liters/kg, which limits the usefulness of extracorporeal means in removing excess amounts of the drug. Colchicine accumulates in the gastrointestinal tract, leucocytes, liver, kidney and spleen.[10] The major route of excretion is via the liver. Urinary excretion is approximately 16% to 47% of an administered dose. Most of the drug, however, is excreted in the stool, due to the enterohepatic circulation.

The use of colchicine in an acute attack of gout can be remarkably effective. When the drug is given within the first few hours of an attack, less than 5% of sufferers fail to obtain relief.[6] Pain, swelling and erythema typically abate within 12 hours and are gone within 48 to 72 hours. The total dose required to ameliorate an attack is 4 mg to 10 mg, given in doses of 0.5mg to 1.2 mg, taken every one to two hours until the pain disappears or gastrointestinal symptoms occur (the drug is available in 0.5mg or 0.6 mg tablets). A total daily dose should not exceed 10 mg.[6] In one of the largest series of colchicine ingestions ever collected,[11] the authors described the survival of all patients who ingested less than 0.5 mg/kg and the death of all who ingested more than 0.8 mg/kg. In another large series, most adult patients survived after ingesting doses of 40 mg or less, whereas all patients who ingested 50 mg or more died.[12]

Clinical Course

The clinical course of colchicine overdose has been well defined by Stapczynski and colleagues and can be divided into three stages.[9,13]

In Stage I, beginning within one to six hours of a sufficient amount of the drug, there can be rather profound gastrointestinal symptoms such as abdominal pain, nausea, vomiting, profound watery diarrhea, leading to volume depletion and hypotension. These gastrointestinal events are thought to be due to a neurogenic cause rather then direct irritation of the gastrointestinal tract. In the initial stage a peripheral leucocytosis is a common event with numerous immature myeloid cells, damaged cells with karyorrhexis (a rupture of the cell nucleus in which the chromatin disintegrates into formless granules which are extruded from the cell), and unsegmented granulocytes.

Stage II can be devastating to the patient and a major headache for the treating physician. In this stage the life-threatening complications commence. This part of the cycle typically occurs 24 to 72 hours post ingestion. There can be central respiratory depression, pulmonary edema and weakness of the pulmonary muscles. Colchicine apparently can have a direct toxic effect on skeletal muscles. Hematologic problems increase with subsequent severe granulocytopenia, thrombocytopenia and possible consumptive coagulopathy. Bone marrow suppression reaches its lowest point between the fourth and seventh day post ingestion.[3] The absence of bone marrow suppression suggests mild toxicity. Cardiovascular complications can also present with evils such as shock from intravascular volume depletion, decreased cardiac output and dysrhythmias. Sudden cardiac arrest following asystole has been reported 36 and 54 hours post ingestion despite adequate oxygenation and fluid-balance therapy.

Most people who die from colchicine toxicity do so from shock in the first 72 hours. In addition to these nightmares, many patients experience oliguric renal failure, hematuria and proteinuria. Renal dysfunction is thought to be related to hypoxia, hypotension, and myoglobinuria, and probably not to direct renal toxicity from the colchicine. In addition to these insults to the homeostasis of the body, metabolic derangements such as hypokalemia, hyponatremia, hypocalcemia, and metabolic acidosis are common features of this poisoning. This sounds like the toxin from hell and it is the kind of drug that I would wish on my worst enemy. (In my family we were taught, from very early in our lives, to never forget and never forgive.) There can be neurological changes as well (stop, I've had enough already) ranging from simple confusion to coma. The central nervous system adversities can develop either because of poor cerebral perfusion or as a result of direct cerebral toxicity.

If the patient survives these horrors there is a Stage III, manifested by rebound leucocytosis and alopecia.[3] Hair regrowth begins after the first 30 days. By the tenth day, in survivors, most organ systems show signs of improvement. It is well to recall that sepsis can readily occur in acute colchicine overdose. If the patient shows clinical deterioration, look for this complication; it is a common cause of death at three to seven days post ingestion.

Management

The management of a patient poisoned by colchicine does not involve much in the way of specific therapy; there is, of course, no antidote or antagonist. Because vomiting and diarrhea are such common events early in the course of such poisonings, administering ipecac or a cathartic seems inappropriate. However,

there is a latent period between interface with the drug and symptoms/signs onset, and if clinical adversities have not yet occurred, and if the patient is not obtunded or seizing, ipecac could be administered.[10]

Activated charcoal seems to be efficient, and multiple dose charcoal therapy (every three to four hours) could be helpful because of the enterohepatic circulation of colchicine. Extracorporeal elimination of the drug is probably not a good idea because of the large volume of distribution and limited renal excretion.

In the early phases of this poisoning, hypotension apparently is the biggest obstacle and threat to life and should be treated with intravenous fluids or vasopressors, if the fluids fail. Needless to say, cardiorespiratory monitoring is a wise and necessary part of the management. The treatment for all organ damage from this drug is supportive.

In all honesty, I detest this drug. A recent experience with multiple attacks of gout and the use of colchicine put me on the porcelain pony for long rides accompanied by weight loss, anorexia and terminal testiness. Possibly I was punished for speaking evil of Medea. However, Medea was a woman scorned, and she killed her enemies in skillful acts of revenge, exclaiming, "By death, oh, by death, shall the conflict of life be decided, life's little day ended."[14] At times this most horrible sorceress allegedly used colchicine to kill her adversaries—I believe it—and those poor victims did not even have access to adult sized Pampers—a fate worse than death. ❑

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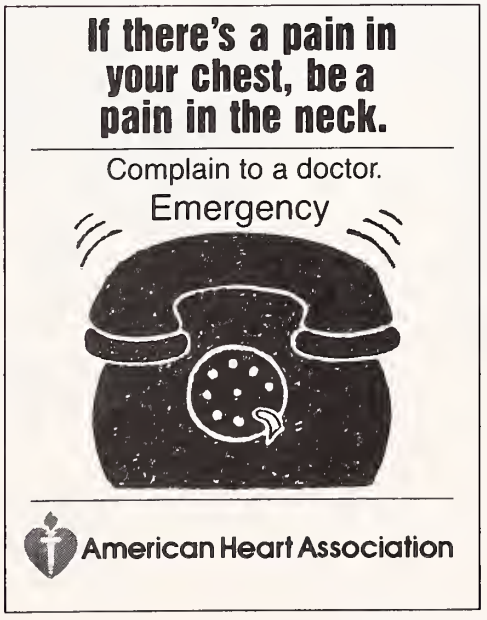
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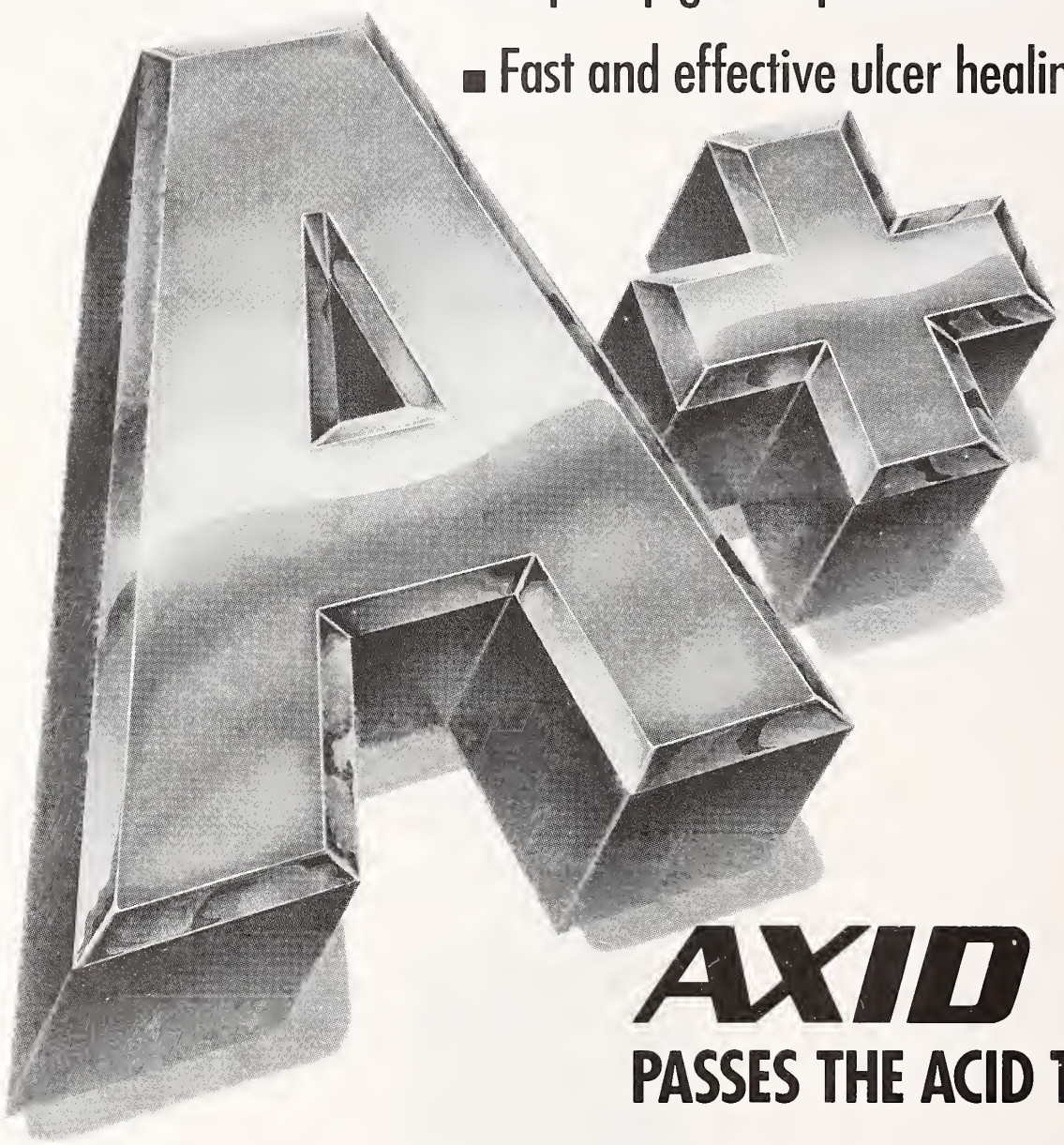


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See adjacent page for references and brief summary of prescribing information.

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Brief Summary. Consult the package insert for complete prescribing information.
Indications and Usage: 1. *Active duodenal ulcer*—for up to 8 weeks of treatment. Most patients heal within 4 weeks.

2. *Maintenance therapy*—for healed duodenal ulcer patients at a reduced dosage of 150 mg h.s. The consequences of therapy with Axid for longer than 1 year are not known.

Contraindications: Known hypersensitivity to the drug. Because cross sensitivity in this class of compounds has been observed, H_2-receptor antagonists, including Axid, should not be administered to patients with a history of hypersensitivity to other H_2-receptor antagonists.

Precautions: *General*—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Dosage should be reduced in patients with moderate to severe renal insufficiency.

3. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests—False-positive tests for urobilinogen with Multistix® may occur during therapy.

Drug Interactions—No interactions have been observed with theophylline, chlordiazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450 enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increased serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility—A 2-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a 2-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a 2-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect; but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in 1 fetus, and at 50 mg/kg, it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in 1 fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers—Studies in lactating women have shown that 0.1% of an oral dose is secreted in human milk in proportion to plasma concentrations. Because of growth depression in pups reared by treated lactating rats, a decision should be made whether to discontinue nursing or the drug, taking into account the importance of the drug to the mother.

Pediatric Use—Safety and effectiveness in children have not been established.

Use in Elderly Patients—Healing rates in elderly patients were similar to those in younger age groups as were the rates of adverse events and laboratory test abnormalities. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of varying durations included almost 5,000 patients. Among the more common adverse events in domestic placebo-controlled trials of over 1,900 nizatidine patients and over 1,300 on placebo, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common with nizatidine. It was not possible to determine whether a variety of less common events were due to the drug.

Hepatic—Hepatocellular injury (elevated liver enzyme tests or alkaline phosphatase) possibly or probably related to nizatidine occurred in some patients. In some cases, there was marked elevation (>500 IU/L) in SGOT or SGPT and, in a single instance, SGPT was >2,000 IU/L. The incidence of elevated liver enzymes overall and elevations of up to 3 times the upper limit of normal, however, did not significantly differ from that in placebo patients. All abnormalities were reversible after discontinuation of Axid. Since market introduction, hepatitis and jaundice have been reported. Rare cases of cholestatic or mixed hepatocellular and cholestatic injury with jaundice have been reported with reversal of the abnormalities after discontinuation of Axid.

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in 2 individuals administered Axid and in 3 untreated subjects.

CNS—Rare cases of reversible mental confusion have been reported.

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to nizatidine. Impotence and decreased libido were reported with equal frequency by patients on nizatidine and those on placebo. Gynecomastia has been reported rarely.

Hematologic—Fatal thrombocytopenia was reported in a patient treated with nizatidine and another H_2-receptor antagonist. This patient had previously experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity—As with other H_2-receptor antagonists, rare cases of anaphylaxis following nizatidine administration have been reported. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine have been reported.

Overdosage: Overdoses of Axid have been reported rarely. If overdosage occurs, activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis does not substantially increase clearance of nizatidine due to its large volume of distribution.

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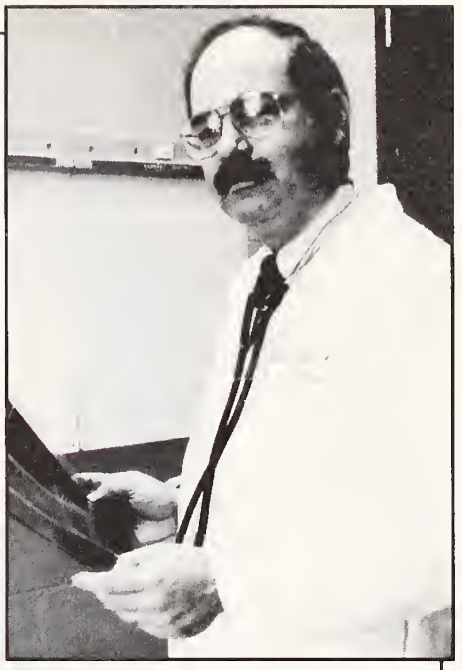
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Affirming Physicians' Professionalism Against the Destructive Influence of Private Third Party Relations

Durham-Orange County Resolutions

James P. Weaver, M.D.

Buffeted by powerful forces in the current medical care environment, today's physicians are losing a sense of who they are and of how to behave as true professionals. The traditional role of the physician professional—educated, autonomous, and concerned—has been taken from physicians by the actions of the Federal Government in the Medicare laws. Even worse, it is given away by physicians in their contractual and non-contractual arrangements with private third party payors. This loss of a sense of professionalism is the source of much of the disillusionment physicians have with today's medicine, for it is our professionalism that made us distinctive. Retrieving a sense of ourselves as professionals requires that we reevaluate our relationships with the private third party payors. It is in these associations that physicians can still have enough independence to act as professionals.

Our professionalism is deeply rooted in social tradition. Webster's defines a profession as, "a vocation or occupation requiring advanced training in some liberal art or science and usually involving mental rather than manual work as teaching, engineering, especially law, medicine or theology." But the deeper meaning of profession includes much more. The emblem of the professional includes a sense of autonomy to set working hours, an ethical norm for behavior, and, most importantly, the ability to make independent decisions in areas of established expertise. When we give these up, we lose much of the essence of being a physician.

If physicians examine these characteristics of professionalism in light of our behavior with third parties, we see that many of these qualities have either been taken from or, worse, given away by us. Ceding the freedom to make decisions about the details of the care of our patients is the most glaring example of the loss of our professional identity. Third party payors routinely question not only our decisions to admit patients to the hospital, to perform procedures, to send patients home, and to do certain diagnostic tests on the patient, but they constantly "review" (from a distance) the daily management of the patient's hospital course. The loss of our professional authority will only increase as long as physicians continue to give it away, and give it away we do in our usual behavior with the private third party payors.

From Central Carolina Cardiovascular and Thoracic Surgical Associates, P.A., 4125 Ben Franklin Blvd., Durham 27704.

Current Behavior Destructive to Professionalism

It is commonplace for a physician's office staff, even physicians themselves, to communicate directly with the third party entity over issues of precertification and utilization review. Physicians have accepted this role with their usual gusto, as if their sacred obligation were to the insurance company rather than to the patient, even though they have never signed a contract with the third party. Our patients accept this behavior, because it makes their life simpler. And so we have all gradually moved into a perspective where physicians and patients alike behave as if a contract exists between the

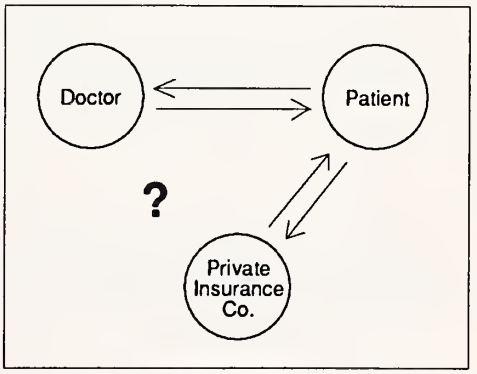


Figure 1. Often the physician has no relationship to the private third party.

physician and the third party even though, in many instances, it clearly does not.

When we have not signed a contract (HMO or otherwise), or when it is not mandated by law (Medicare), it is detrimental to our role as professionals for physicians to communicate directly with a third party. It is detrimental to physicians because, in seeking the "approval" of the third parties, we tacitly hand them our authority to make medical decisions about the detailed management of our patients. This is the authority that lies at the soul of our professionalism; we should not unwittingly give it away. The private third parties will presume to determine which hospitalization is "appropriate" and which test is "indicated" and on which day our patient "should be discharged" as fully as we physicians allow them to because in gaining this control they maximize their influence and profit. When we naively give them this authority by dealing directly with them, we lessen our rightful role in patient encounters not only in our own minds, but just as importantly, in the minds of our patients.

Why should physicians obtain "precertification" and answer the increasing number of intrusive calls from the review agencies? That is something we physicians must ask ourselves. If it is our fear of competition with our fellow physicians, if it is our belief that we must "help" our patients with both illness and paperwork, if it is our erroneous notion that we actually work not for the patient but for the third party, or if it is our implicit expectation that we will get more money from the third party than from our patient, then it is time to reconsider our motivations. We must understand what we are forfeiting as professionals when we imagine an obligation between ourselves and a third party when none actually exists.

Clarifying Relationships and Reestablishing Professionalism

Regaining our lost professional identity by changing our actions is the focus of two communication forms: "Patient Managed Precertification" and "Patient Managed Third Party Communication" (figures 2A and 2B). Resolutions related to these forms are being presented by the Durham-Orange Medical Society to the North Carolina Medical Society House of Delegates This month. These forms offer the physicians of this state a specific

North Carolina Medical Society
PATIENT MANAGED PRECERTIFICATION FORM

The following information is necessary and adequate to obtain precertification from your insurance company. Precertification is usually necessary for your insurance company to pay for your hospitalization or procedure.

Patient Name: _____
Insurance Company _____ Insurance ID# _____
Your Diagnosis _____ (ICD-9) Code: _____
Procedure(s) Planned _____ Date: _____
CPT Procedure Code(s): _____
Does insurance require second opinion: Yes____ No ____
Name of Hospital: _____ Estimated length of stay: ____days
Name of person you spoke with at insurance company: _____

Once precertification is obtained, notify our office. If you have any problems we will help you in any way we can.

_____, M.D. _____, R.N.

Date _____

Note: This form is to be filled in by the physician and given to the patient.

Figure 2A. Proposed form for patient managed precertification.

North Carolina Medical Society
PATIENT MANAGED THIRD PARTY COMMUNICATION FORM

Your insurance company is requesting information to certify the reason for your continued hospitalization. Please have a member of your family call them with the information listed below, otherwise they may not pay your hospital bill.

Your Name: _____
Insurance Company: _____ Insurance Co. ID# _____
Your Diagnosis: _____ Diagnosis Code (ICD-9): _____
Procedure: _____
Date of Procedure/Hospitalization: _____
Procedure Code (CPT): _____
Reason for continued hospitalization: _____
_____
_____
Name of Hospital: _____
Estimated additional days needed: _____
Name of insurance company contact: _____

Once this communication is completed, notify our office. If you have any problems we will help you in any way we can.

_____, M.D. _____, R.N.

Note: This form is to be filled in by the physician and given to the patient.

Figure 2B Proposed form for patient managed communication with third parties—i.e., utilization review.

mechanism by which they can begin to modify their behavior in the private, noncontractual (that is, with no signed contract) third party interaction. By having patients deal directly with their insurance companies, physicians demonstrate that their direct relationship is with the patient and that there is no direct relationship with the third party. Both the physician and the patient gain in the process.

Our patients gain an understanding that the physician is working for them, and not for the third party. They also learn something about the tactics of insurance companies and, in the process, learn about the cost containment pressures in today's medical care environment. In a sense, by allowing the patients to deal with their own insurance companies, physicians invite their patients into an arena where they belong anyway. It is time that we stop sheltering our patients from the realities of the insurance marketplace. We must ask them to participate in the process.

Physicians also gain from this new approach. First, by asking the patients to deal with their own insurance companies, we show that we do not answer to the third party—with all the negative implications that this entails—but that we work for the patient. Second, physicians demonstrate who is the professional, who makes the decisions, who is the advocate of whom, and finally, that the third party actually is indeed a "third party" in every sense of the word.

The implication of these actions is to reestablish our professionalism; the effects range far beyond the simple form that we will complete for our patients. These actions begin to redefine a new position for physicians in the ever changing medical care marketplace. This redefinition will help us to see who we are and how to recognize and respond to future threats to our rightfully earned professionalism. What we create today out of our profession will attract the doctors of the future, and who we attract to join our ranks will determine the quality of medical care for generations to come. ❑

Management Style

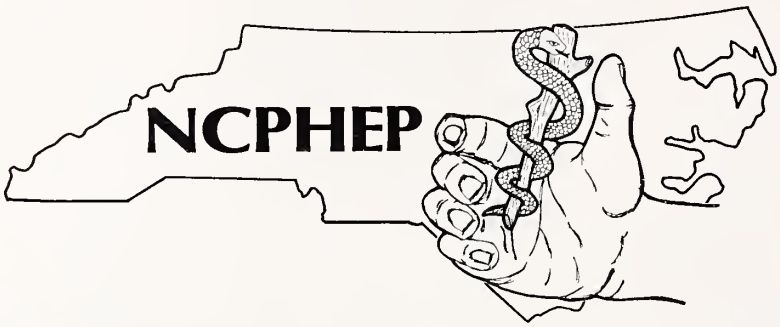
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R.C. Vanderberry, MD, Medical Director

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Letters to the Editor

Comment on cocaine-induced mesenteric ischemia article

To the Editor:

In browsing through the September 1991 issue of the *Journal* I had the opportunity to read Dr. Tracy Martin's scientific paper, "Cocaine-Induced Mesenteric Ischemia" (52:429-30). I was particularly interested in the management of this case following the primary diagnoses being made, i.e., cocaine dependence. While I have no concerns about physicians urging their patients to stop cocaine consumption, controlling their visitors while in the hospital, and monitoring activities, I do have some very significant concerns about what appeared to be the lack of appropriate intervention by someone who had expertise in dealing with addictive diseases. The fact that the patient continued his use of cocaine post-discharge from the hospital is not particularly interesting, but is in fact the expected result, a consequence of his untreated disease of cocaine dependence.

It has been my experience that an individual who is suffering the consequences of his disease of addiction may very well be at a point where he would be willing to listen to some of the alternatives to the continued active phase of his disease. I would certainly encourage all physicians, when they interact with individuals in medical settings, to at least consult with a physician familiar with addictive diseases, and offer this service to their patients. At the very least, the patient should be provided with a treatment plan at the point of discharge which would include at least one resource for the treatment of his addiction.

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High Point 27262

Comment on DWI (driving while impaired) article

To the Editor:

I agree with Dr. Dykers' statement in his paper "Chaos, Alcoholism, and DWI" (NCMJ 1991;52:394-7) that the "DWI record and the blood-alcohol concentration are valuable landmarks" for the diagnosis of alcoholism. The driving record is probably the best laboratory test for determining whether an individual drinks and drives because it includes tests for alcohol in breath or blood that are carefully correlated, for legal reasons, with the act of driving.

However, nothing in the driving record is diagnostic of alcoholism. The large proportion of persons convicted of DWI who are found on evaluation by certified substance abuse counselors to have evidence of alcoholism certainly suggests that DWI is a marker of increased risk for having the disease alcoholism (although that cannot be confirmed without sampling the population of drivers without DWI convictions and evaluating them for substance abuse). Nevertheless, many persons convicted of DWI are not found to have alcoholism, and therefore it should not be assumed that a person convicted of DWI is ill until proven well.

There is a compelling need for rigorous scientific evaluation of commonly held assumptions about drinking, driving, and alcoholism. In the absence of scientific data, one way to make public health policy is to call a consensus conference of experts on a particular subject. The National Council on Alcoholism, for example, suggests that a clinical guide for the absolute diagnosis of alcohol dependence is a blood alcohol level of more than 150mg/dL (an alcohol concentration of .15g/100ml) without gross evidence of intoxication.[1] However, this would not apply to DWI because nearly all drivers arrested for DWI have presumably been driving as though they were impaired.

To my knowledge, no expert panel has been able to decide upon a particular alcohol level that is diagnostic of alcoholism. The Driver and Pedestrian Research Unit of the National Highway Traffic Safety Administration plans to convene an expert panel to identify characteristics of problem drinkers so that questionnaires used for this purpose can be validated (Frank JF, Personal Communication). However, this panel will not attempt to confirm or refute statements such as that of Dr. Dykers, who stated in his article that an alcohol level of .14 or greater is "diagnostic of alcoholism in a drunk driver." Statements such as these that are not supported by scientific evidence run the risk of doing more harm than good by creating doubt among policy makers and the public about the truth of statements made in the press.

Many assumptions about alcohol levels and alcoholism still need to be tested scientifically. Those of us who have the responsibility for traffic safety cannot afford to base our recommendations on mere opinion, no matter how well informed. Furthermore, making the diagnosis of alcoholism is not sufficient in itself to determine whether a person should be licensed to drive. For example, a person diagnosed with alcoholism may be fit to drive if he is in recovery or if he abstains from driving after drinking alcohol. Conversely, a person who is not diagnosed as having alcoholism is not fit to drive if he drives while impaired.

In other words, the difficult task faced by Dr. Dykers, myself, and the many physicians and non-physicians who share the responsibility for traffic safety in North Carolina is not to use the driving

privilege as an incentive for drunks to seek treatment; it is to ensure that the drunks and the non-drunks do not drive drunk.

I would also like to make the following correction: Dr. Dykers' article stated in a footnote that "The records are then sent to the Driver Medical Advisor in the Division of Health Services... . " Since 1989 the Driver Medical Advisor's administrative location has been the Injury Control Section, Division of Epidemiology, Department of Environment, Health, and Natural Resources.

Thomas B. Cole, M.D., M.P.H.
Section Chief
Injury Control Section
Department of Environment, Health, and Natural Resources
Raleigh 27611-7687

Reference
1 Baird MA. Early detection of alcoholism. Physician Assistant, July, 1991: 35-9.

Dr. Dykers's Response

To the Editor:

It is pejorative hyperbole to state that "nothing in the driving record is diagnostic of alcoholism" when the driving record often documents years of alcoholism with repeated blood alcohol concentrations over .30 and documents patterns of end stage disease that anyone would call diagnostic. The test of clinical acumen is in recognizing the disease earlier in its process, before end stage.

"A consensus conference of experts" on drunk drivers has been held and is referenced. The physicians participating had a combined experience of over 18,000 cases of face-to-face interviews with drunk drivers with all of the medical records, substance abuse counselor reports, and driving records available. My paper is primarily an effort to put in perspective this consensus in a functional manner that might reduce the death and disability thrust upon the public by drunk drivers. I was the most junior member of this group with only 600 cases at the time and, frankly, was willing to settle for a .18 as the blood alcohol concentration diagnostic of alcoholism, and the more experienced members agreed on a .14. With the National Council on Alcoholism suggesting a level of .15 "without gross evidence of intoxication," it sounds as though we're getting close. Dr. Cole's failure to extrapolate this to someone with a DWI strains the definition of "gross evidence of intoxication": most of us who do not have tolerance would be unable to crawl to the car with a .15, much less start it up and venture down the highway. Dr. Cole may not wish to recognize the expertise of this particular group, but that sounds more like turf-guarding than intellectual integrity. The blood alcohol level of .14 that is "diagnostic of alcoholism in a drunk driver" includes the additional evidence of other aspects of the disease, such as the denial, rationalization, and minimization that are necessary to drink and drive. Uniformly, these people, when interviewed sober, do not think that driving drunk is appropriate behavior.

I fully agree that "a person diagnosed with alcoholism may be fit to drive if he is in recovery," and for this reason I see every benefit in using "the driving privilege as an incentive for drunks to seek treatment." If these drunks no longer drink, we at least have made progress. When Dr. Cole has a technique "to ensure that the drunks and the non-drunks do not drive drunk," I'm certain we shall all be most appreciative and glad to hear about it.

In looking toward the future, if we lower the blood alcohol concentration to .08 for the legal definition of DWI, then we will have more persons who are "not fit to drive" and who are not alcoholics. Dr. Cole is still struggling, as are the rest of us, with the linear sense of the word diagnostic. The intellectual handles provided by the mathematics of chaos are helpful in understanding the complexities of alcohol use patterns and diseases. We will not all grasp these handles readily.

I do thank Dr. Cole for keeping us straight on the linear relationships of the administrative locations in the Department of Environment, Health, and Natural Resources. Unfortunately, the physicians on the Driver's License Review Boards have not received consistent communication from the Injury Control Section, and we were not even informed of Dr. Cole's arrival.

John R. Dykers, Jr., M.D.
P.O. Box 565
Siler City 27344

Efficacy of generic drugs

To Ann Sawyer, Governmental Affairs Department, North Carolina Medical Society:

You may or may not remember that there was considerable advertisement from the Department of Health and Human Services about how they had just finished testing many, many generic drugs and found them all quite satisfactory. What they forgot to mention was that they did not test the pharmacologic or biologic efficacy or absorption of any of these pills or capsules or solutions. All they tested was water solubility. Somehow it seems to me quite necessary that the medical profession, through its organizations, keep reminding the public that generics as a group do not immediately equate with licensed tested biologically established drugs.

H. William Gillen, M.D.
Wilmington Neurological Associates
1301 Cypress Grove Drive
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Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

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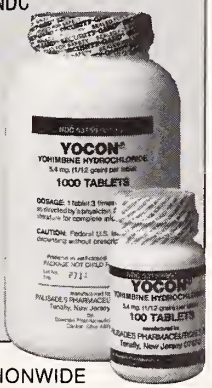
Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

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References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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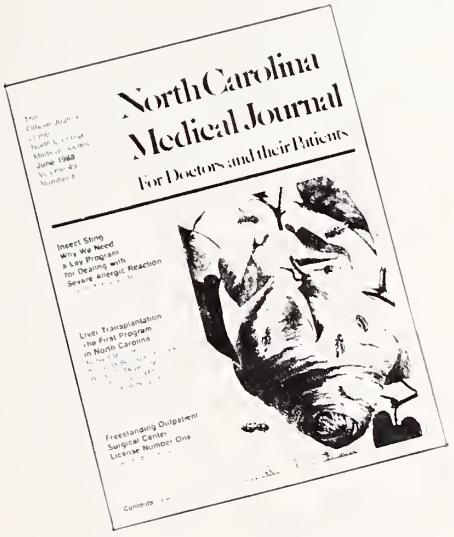
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Aphorisms of the Month

Edited by Daniel Sexton, M.D.

Physicians

The ideal physician should be a combination of three persons—a clergyman, a fireman and a scientist.

—Murray Bass

The one mark of maturity, especially in a physician, and perhaps it is even rarer in a scientist is the capacity to deal with uncertainty.

—William B. Bean

Recognizing his own fallibility, the physician must treat a variety of possible complications in the seriously ill. Too often, though, the practice simply illustrates a cardinal principle of medicine: *The hardest thing to do is nothing.*

—Leighton Cluff

No families take so little medicine as those of doctors, except those of apothecaries.

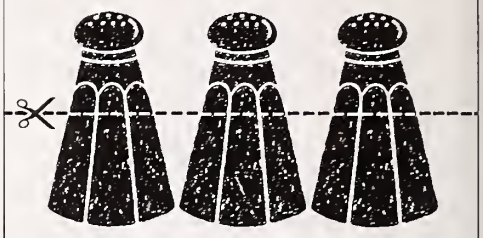
—Oliver Wendell Holmes

If the average man is a harp on whom nature occasionally plays, the physician is an instrument on whom the emotions are played continuously during his working hours and that is not too good for any man.

—Merrill Moore

Go against the grain.

Cut down on salt.



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ADVERSE REACTIONS: Headache, sometimes severe, seems to be related to Zantac® administration. Constipation, diarrhea, nausea/vomiting, abdominal discomfort/pain, and, rarely, pancreatitis have been reported. There have been rare reports of malaise, dizziness, somnolence, insomnia, vertigo, tachycardia, bradycardia, atrioventricular block, premature ventricular beats, and arthralgias. Rare cases of reversible mental confusion, agitation, depression, and hallucinations have been reported, predominantly in severely ill elderly patients. Rare cases of reversible blurred vision suggestive of a change in accommodation have been reported.

In normal volunteers, SGPT values were increased to at least twice the pretreatment levels in 6 of 12 subjects receiving 100 mg qid intravenously for seven days, and in 4 of 24 subjects receiving 50 mg qid intravenously for five days. There have been occasional reports of hepatitis, hepatocellular or hepatocanalicular or mixed, with or without jaundice. In such circumstances, ranitidine should be immediately discontinued. These events are usually reversible, but in exceedingly rare circumstances death has occurred.

Blood count changes (leukopenia, granulocytopenia, thrombocytopenia) have occurred in a few patients. These were usually reversible. Rare cases of agranulocytosis, pancytopenia, sometimes with marrow hypoplasia, and aplastic anemia have been reported.

Although controlled studies have shown no antiandrogenic activity, occasional cases of gynecomastia, impotence, and loss of libido have been reported in male patients receiving Zantac, but the incidence did not differ from that in the general population.

Incidents of rash, including rare cases suggestive of mild erythema multiforme, and, rarely, alopecia, have been reported, as well as rare cases of hypersensitivity reactions (eg, bronchospasm, fever, rash, eosinophilia), anaphylaxis, angioneurotic edema, and small increases in serum creatinine.
OVERDOSAGE: Information concerning possible overdosage and its treatment appears in the full prescribing information.
DOSAGE AND ADMINISTRATION: (See complete prescribing information in Zantac® product labeling.)
Dosage Adjustment for Patients with Impaired Renal Function: On the basis of experience with a group of subjects with severely impaired renal function treated with Zantac, the recommended dosage in patients with a creatinine clearance less than 50 ml/min is 150 mg or 10 ml (2 teaspoonfuls equivalent to 150 mg of ranitidine) every 24 hours. Should the patient's condition require, the frequency of dosing may be increased to every 12 hours or even further with caution. Hemodialysis reduces the level of circulating ranitidine. Ideally, the dosage schedule should be adjusted so that the timing of a scheduled dose coincides with the end of hemodialysis.
HOW SUPPLIED: Zantac® 300 Tablets (ranitidine hydrochloride equivalent to 300 mg of ranitidine) are yellow, capsule-shaped tablets embossed with "ZANTAC 300" on one side and "Glaxo" on the other. They are available in bottles of 30 (NDC 0173-0393-40) tablets and unit dose packs of 100 (NDC 0173-0393-47) tablets.
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September 1990

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November 14-15
ACLS Retraining Course
Place: Raleigh
Credit: 8 hours AAFP
Info: Helen Creech, R.N., Course Coordinator, Rex Hospital, 4420 Lake Boone Trail, Raleigh 27607. 919/783-3161

November 15
Prostate Cancer: Screening and Treatment Controversies
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

November 16
Osteoporosis: Diagnosis and Treatment in the 1990s
Place: Charlotte
Credit: 6 hours Catagory I, AMA
Fee: $35. Pre-registration required before November 8
Info: Joyce Scull, Arthritis Foundation, 6101 Idlewild Road, Suite 210-I. Charlotte 28212. 704/535-8303

November 16-17
George Ham Symposium
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

November 22-24
Winter Family Physicians Weekend
Place: Asheville
Credit: Approx. 12-14 hours, AAFP
Fee: $150
Info: Marietta Ellis, NC Academy of Family Physicians, P.O. Box 18469, Raleigh 27619. 919/781-6467

December 6-7
6th Annual Sports Medicine Conference
Place: Research Triangle Park
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

December 6-7
Management of Patients with Vascular Disease
Place: Chapel HIll
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

December 7
UNC Ophthalmology Residents' Day
Place: Chapel Hill
Credit: 6 hours Category I, AMA
Info: Ms. Christine C. Cotton, Department of Ophthalmology, CB #7040, Chapel Hill 27599-7040

January 16-17
ACLS Retraining Course
Place: Raleigh
Credit: 8 hours AAFP
Fee: $75
Info: Helen Creech, R.N., Course Coordinator, Rex Hospital, 4420 Lake Boone Trail, Raleigh 27607. 919/783-3161

January 23-25
Geriatric Update
Place: Chapel Hill
Info: Office of CME, UNC School of Medicine, CB #7000, 231 MacNider Building, Chapel Hill 27599-7000. 919/962-2118

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Contraindications: Severe LV dysfunction (see *Warnings*), hypotension (systolic pressure < 90 mm Hg) or cardiogenic shock, sick sinus syndrome (if no pacemaker is present), 2nd- or 3rd-degree AV block (if no pacemaker is present), atrial flutter/fibrillation with an accessory bypass tract (eg, WPW or LGL syndromes), hypersensitivity to verapamil.

Warnings: Verapamil should be avoided in patients with severe LV dysfunction (eg, ejection fraction < 30%) or moderate to severe symptoms of cardiac failure and in patients with any degree of ventricular dysfunction if they are receiving a beta-blocker. Control milder heart failure with optimum digitalization and/or diuretics before Calan SR is used. Verapamil may occasionally produce hypotension. Elevations of liver enzymes have been reported. Several cases have been demonstrated to be produced by verapamil. Periodic monitoring of liver function in patients on verapamil is prudent. Some patients with paroxysmal and/or chronic atrial flutter/fibrillation and an accessory AV pathway (eg, WPW or LGL syndromes) have developed an increased antegrade conduction across the accessory pathway bypassing the AV node, producing a very rapid ventricular response or ventricular fibrillation after receiving I.V. verapamil (or digitalis). Because of this risk, oral verapamil is contraindicated in such patients. AV block may occur (2nd- and 3rd-degree, 0.8%). Development of marked 1st-degree block or progression to 2nd- or 3rd-degree block requires reduction in dosage or, rarely, discontinuation and institution of appropriate therapy. Sinus bradycardia, 2nd-degree AV block, sinus arrest, pulmonary edema and/or severe hypotension were seen in some critically ill patients with hypertrophic cardiomyopathy who were treated with verapamil.

Precautions: Verapamil should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of overdosage. Verapamil may decrease neuromuscular transmission in patients with Duchenne's muscular dystrophy and may prolong recovery from the neuromuscular blocking agent vecuronium. It may be necessary to decrease verapamil dosage in patients with attenuated neuromuscular transmission. Combined therapy with beta-adrenergic blockers and verapamil may result in additive negative effects on heart rate, atrioventricular conduction and/or cardiac contractility; there have been reports of excessive bradycardia and AV block, including complete heart block. The risks of such combined therapy may outweigh the benefits. The combination should be used only with caution and close monitoring. Decreased metoprolol and propranolol clearance may occur when either drug is administered concomitantly with verapamil. A variable effect has been seen with combined use of atenolol. Chronic verapamil treatment can increase serum digoxin levels by 50% to 75% during the first week of therapy, which can result in digitalis toxicity. In patients with hepatic cirrhosis, verapamil may reduce total body clearance and extrarenal clearance of digitoxin. The digoxin dose should be reduced when verapamil is given, and the patient carefully monitored. Verapamil will usually have an additive effect in patients receiving blood-pressure-lowering agents. Disopyramide should not be given within 48 hours before or 24 hours after verapamil administration. Concomitant use of flecainide and verapamil may have additive effects on myocardial contractility, AV conduction, and repolarization. Combined verapamil and quinidine therapy in patients with hypertrophic cardiomyopathy should be avoided, since significant hypotension may result. Concomitant use of lithium and verapamil may result in a lowering of serum lithium levels or increased sensitivity to lithium. Patients receiving both drugs must be monitored carefully. Verapamil may increase carbamazepine concentrations during combined use. Rifampin may reduce verapamil bioavailability. Phenobarbital may increase verapamil clearance. Verapamil may increase serum levels of cyclosporin. Verapamil may inhibit the clearance and increase the plasma levels of theophylline. Concomitant use of inhalation anesthetics and calcium antagonists needs careful titration to avoid excessive cardiovascular depression. Verapamil may potentiate the activity of neuromuscular blocking agents (curare-like and depolarizing); dosage reduction may be required. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. Pregnancy Category C. There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor, and delivery only if clearly needed. Verapamil is excreted in breast milk; therefore, nursing should be discontinued during verapamil use.

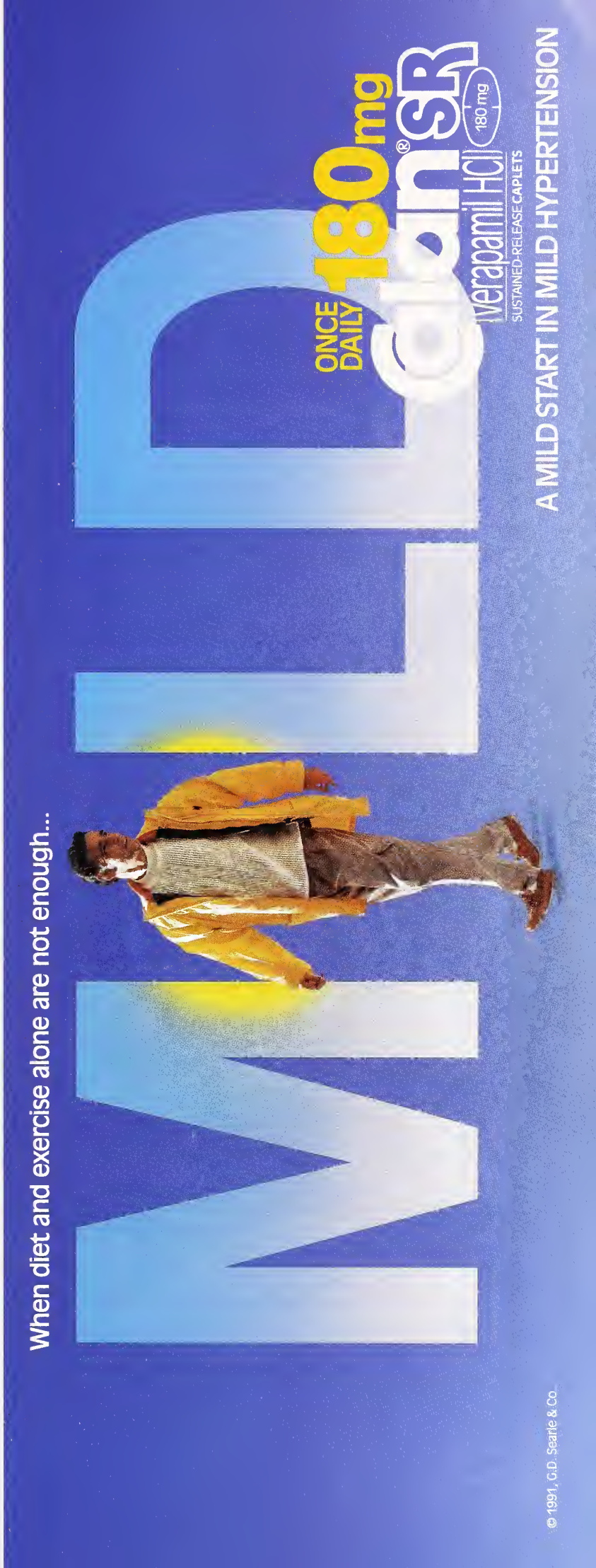
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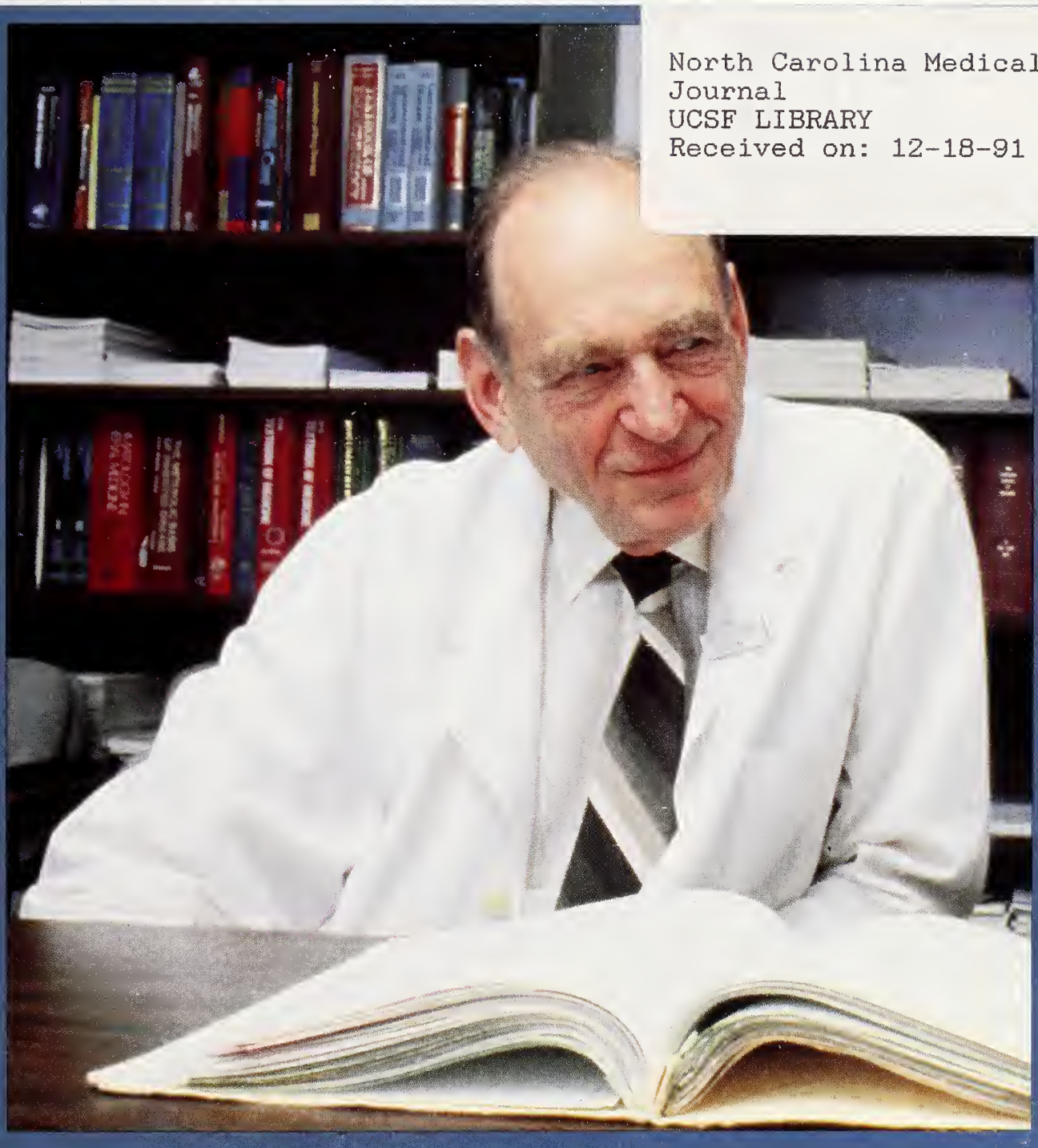
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For Doctors and their Patients

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Two Souvenirs for Dr. Stead

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Snapshots from a Chief Resident, by William Hollingsworth, M.D.

Steady Thoughts: Reflections of Eugene Stead In Action, by Francis A. Neelon, M.D.



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For Doctors and their Patients

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North Carolina Medical Journal

FOR DOCTORS AND THEIR PATIENTS

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Eugene A. Stead, Jr., M.D. (1952): Chief of Service when Dr. Hollingsworth served as his chief resident at Duke.

Two Souvenirs for Dr. Stead

Eugene Anson Stead, Jr.

Gene Stead has been blessed with good health and a remarkable mind and he has made maximum use of his potential. He reminds me of a favorite Latin phrase that I learned in my youth, "Mens sana in corpore sano,"—"A sound mind in a sound body." His curriculum vitae attests to the energetic application of his talents. I knew him at the Boston City Hospital when he was an instructor at Harvard; he was an unusually astute clinician and a rising star in the field of medicine. Then came the War and I know little about his life until he became chairman of the Department of Medicine at Duke in 1947. I was teaching there one day a week while practicing medicine privately. Gene came on the scene with a world of changes in mind regarding teaching, research, and administration. As a result Duke has become one of a few great medical schools in the world. No other Duke faculty member, except Dean W.C. Davison, has had the effect of Gene Stead. The two contributions that follow, by Dr. W. Hollingsworth and Dr. F.A. Neelon, demonstrate some of the ways that Dr. Stead has affected his colleagues and students. It is appropriate that we print them now since Dr. Stead will retire as editor of the *North Carolina Medical Journal* on January 1.

Gene Stead and I have become good friends since 1983 when he became editor. At that time and for a few years before, there had been criticism of the *Journal* because it lacked appeal to many of its subscribers. It occurred to me in seeking a new editor to ask Dr. Stead to take on this job, an assignment which he accepted. The *Journal* since then has been a stimulant to the entire medical society. The articles have been provocative, sometimes unique and generally informative. Letters to the editor show the interest of the readers. I feel great warmth in having Gene as a friend. I wish for him and his family great health and happiness, and a continued rewarding future.

Charles W. Styron, M.D.
Chairman, NCMJ Editorial Board

Snapshots from a Chief Resident

William Hollingsworth, M.D.

For as long as I can remember, I thought that I would be a doctor, but only after Eugene Stead and his bright young team arrived at Duke was I sure what type of doctor I wanted to be. I would become a medical teacher and, more precisely, a Professor of Medicine in charge of a department. These ambitions arose not because I wanted power and authority, but because being a Professor provided challenge and intellectual stimulation, factors that I equate with enjoyment of medicine. My views of a career in medicine must have formed shortly after I encountered the Stead team, because Dorothy says that in 1950 when we met and later married, I had already stated that I planned to become a Professor. Maybe one reason she married me was that I so definitely knew what I wanted to become, at a time when others were less certain of their future goals.

I was born in Mount Airy, North Carolina, in 1926, of a well-to-do father who was managing the family lumber business and a mother who came from the colorful clan of Folgers from the adjacent village of Dobson. I had eight uncles and aunts on each side of the family, along with a huge cast of older and often pseudo-cousins, young cousins, semi-aunts and uncles, the entire panoply of a large Southern family. I have often said that I was raised by that clan, and indeed by all of Mount Airy, since my father died when I was 11 years old and my mother had uncontrolled hypertension with strokes. She functioned poorly from the 1930s until her death in 1952. People tend to want to agonize over my childhood, but I really was well cared for and, having wonderful and colorful adults and children as friends and playmates, I thrived. Instead of feeling deprived, I have always felt sorry for those who were not raised in a small Southern town in the 1930s. All of life was there, laid out to see and to understand, highlighted and embellished by intelligent, humorous, gently and strangely tolerant storytellers in the tradition of Southern mountain people.

My family lost its money during the depression, but I had an Uncle Will who generously educated me and other nephews and nieces who needed help. Since Mount Airy High School ended with the 11th grade in those days, I came as a totally naive little country boy to Duke on September 7, 1942. The war had fully disrupted American society, and so I was rushed through college (three years of curriculum in two calendar years) and then graduated from medical school after three additional years. At age 21, in September, 1947, almost exactly five years after I arrived at Duke, I was an M.D.

I had always wanted to be a doctor, because of a family tradition of doctoring among those of my ancestors who were scholarly by nature. More importantly, I had a role model of a doctor in my family practitioner, Roy Mitchell, who was also a close friend of the family and a neighbor. He was totally engrossed in medicine, talked about new information in the discipline, and constantly told stories of his patients and their illnesses. His life was clearly more interesting than that of anyone else in Mount Airy. His life and his work were one and the same, and his intense enthusiasm for medicine was readily contagious. Only years later did I appreciate that Roy Mitchell was a genuinely different and unusual country practitioner. By constant self-education and by enrollment in postgraduate educational courses, he eventually became certified as an internist, a member of the American College of Physicians. I knew that Dr. Mitchell was proud of being in something he called "the College," and it really was a signal achievement.

I found the first two years in medical school somewhat boring, involved as those years were with the sciences basic to clinical medicine—anatomy, physiology, biochemistry. I liked those subjects well enough, but I was hardly a star. The "third year" of medical school (in the accelerated curriculum of World War II, beginning about eighteen months after matriculation) brought the student to the bedside, actually helping care for patients. Once people adjusted to my youth (still only 19), I did very well. I liked people and patients and had stumbled on the great trick of reading about diseases and using the library properly. When I had a patient with leukemia, for example, I found an article on leukemia among the current periodicals in the library. From that article I followed the references to

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"Eugene Stead arrived in January of 1947, and the conquest of Duke by the people from Atlanta was complete."

key papers on the subject, read those and found new references, and finally read the textbooks. Textbooks in those days were often grossly out of date because four years of war had disrupted the usual cycle of rewriting and revision. My system of relying on current journals was effective, and was exciting and fun for me. The Duke Faculty began to notice me, and perhaps to consider me no longer preposterously adolescent.

About that time, Dr. Stead from Emory arrived on the Duke scene as Head of Medicine. I had seen his predecessor, Fred Hanes, only once at a lecture early in my medical school days. Dr. Hanes, scion of the famous North Carolina Family (Hanes Knitting Company), was an elegant, tall and stately white-haired patrician who fully looked the part of senior physician. Dr. Hanes had died of a ruptured aortic aneurysm, a diagnosis he made himself as he fell mortally ill. Dr. Stead was to succeed this man so admired and respected at Duke. Duke had been founded in the 1930s by a group of physicians mostly recruited from Johns Hopkins and headed by the legendary pediatrician and dean, Wilburt Davison, ('Dave' to all). Now Dave had gone to Emory and brought back Gene Stead, and I am sure the faculty were closely watching and comparing Stead with his predecessor.

We students knew little of such things as Chairmen or Deans, but we did know about some people who had recently come from Emory to do research—indeed, were already running tubes from the arm veins into the heart and making measurements of blood pressure and of the oxygen carried in the blood. Although I had missed it, many of my fellow students had been enlisted (for a fee of $15 as I recall) to have a cardiac catheterization, as the procedure was called. In our small world of about 60 students and a dozen faculty, news of the new people and their endeavors spread rapidly.

My first encounter was not with Dr. Stead, but with Jack Myers, one of the Emory team who accompanied Stead to Duke. When Jack came to the ward to see patients and teach, my patient was selected for presentation. He was a man with advanced alcoholic cirrhosis of the liver, very yellow because of his diseased liver, his huge belly distended by ascites. Dr. Myers questioned me about the man's history, about all the physical findings, about the abnormal physiology and biochemistry caused by the damaged and scarred liver. We talked for two and a half hours, the patient's large belly protruding between us. The other students joined in occasionally, but mostly Myers and I discussed every aspect of liver disease.

At the end of the session, Myers harrumphed! and walked away, noting perhaps that at least one Duke student, named Hollingsworth, knew something. What Jack Myers did not know was that cirrhosis had been the subject of my most extensive literature search just the day before; I have never known as much about cirrhosis as I did that particular morning when a stranger named Dr. Myers arrived for ward rounds. I was exhilarated by my own performance, but even more was I excited by the breadth and quality of our discussion. No other member of the Duke faculty could have talked for two and a half hours on cirrhosis, and I was totally and completely enthralled by the people from Emory.

Eugene Stead arrived in January of 1947, and the conquest of Duke by the people from Atlanta was complete. With the end of the War, I suddenly found myself adrift in September of 1947. The wartime schedule was to cease, and the July-July traditional academic year was to start up again in July, 1948. I was lucky to find an unexpected intern vacancy at the University of Maryland, but I went to Dr. Stead to tell him that I wanted to return to Duke to intern again in 1948. He tried hard to get me to apply elsewhere—Boston, Hopkins—but I wanted to work for him, and we left the conversation with the understanding that I would apply only to Duke, unless he absolutely would not have me. He never said that he wouldn't, and so, after nine months in Baltimore, I returned to Duke.

On my return I was a highly experienced doctor with good surgical skills because half the Maryland experience had been in surgery. The extra experience made me, I believe, the natural leader of our group of interns. The Duke schedule required the intern to be "on-call" in the hospital five nights per week. To me, this was really wonderful after having less than one night per month off call at Maryland!

Other interns were afraid of Dr. Stead, but he and I have always been friends on a near egalitarian basis. To this day, he has never spoken a cross or unkind word to me, although he did occasionally lose patience with one or another of his house officers. Like many of his interns and residents, I totally worshipped the man. The group of us talked like him, walked like him, used his figures of speech, adopted his mannerisms. To this day, 40 years after our paths diverged, a little clone of Gene Stead exists in me and may emerge with only slight provocation. When we meet somewhere, we inevitably and immediately fall into conversation as if we had just parted a few minutes ago.

"To this day, 40 years after our paths diverged, a little clone of Gene Stead exists in me and may emerge with only slight provocation."

"Stead ... was constantly probing ways to make patient care better, to improve teaching, to streamline some hospital function, or to make people more responsive, more effective in their jobs."

After the internship year, most of us stayed on at Duke as assistant physicians. Early in that year, Dr. Stead called each of us into his office to tell us that we must leave Duke and go elsewhere for one year of subspecialty fellowship. His reasoning was clear: we had become good doctors and he wanted to send us out as advertisements of the Duke medical product. He was prepared to help each of us get the sort of position we wanted. I did not argue with him, because I felt I did need to work in a different program. I decided on hematology for no particular reason except that I liked the beauty of stained blood cells seen under the microscope; my decision then was largely based on aesthetic considerations. Gene managed to get me offers in hematology from Dick Vilter in Cincinnati and Carl Moore and Ed Reinhard at Barnes Hospital in St. Louis. I decided on St. Louis where I could see private patients essentially all day, every day with Dr. Reinhard, who had built up a huge referral practice from throughout the Midwest.

Perhaps the most important outcome of my year at Barnes was that I became comfortable with the idea of research as a major part of an academic career in addition to teaching and competent patient care. The conversion came about because of my role with Bill Harrington, Carl Moore's research fellow, in what has become an incredibly famous example of physicians as research subjects. One Sunday, perhaps in expiation of a particularly raucous Saturday night party, Bill and I decided to do an experiment we had been musing about. The problem was the disease called idiopathic thrombocytopenia purpura (ITP). Mostly a disease of young women, ITP causes platelets to almost disappear from the blood; since platelets are major factors needed for the clotting of blood, the patients bleed into the skin and from the mouth and gums, nose, and uterus. Fatal internal bleeding can occur. Bill and I felt that ITP was caused by a circulating factor in the patient's bloodstream. With this hypothesis, we planned to take blood from a patient with ITP and give it to a normal person. If there were a circulating factor, the recipient of the transfusion should show a decrease in blood platelets.

We did the experiment by giving Harrington a pint of blood from a patient with ITP, and sequentially testing his blood for platelets, as well as sampling his bone marrow. Within an hour, most of the blood platelets had disappeared from his circulation and remained absent for several hours, as we extended the observations into the night. Following one of the bone marrow aspirations, Harrington had some sort of seizure from which he recovered almost instantaneously. Not knowing what else to do, we went home about 2 a.m. and went to sleep. On hematology rounds at 8 a.m. the next morning, we told Carl Moore the story. The group, including Carl, were skeptical of the experiment. Their skepticism faded when Harrington pulled down his socks and showed the purpuric hemorrhages around his ankles. All skepticism faded when the blood counts confirmed that Bill's platelets were totally gone, and the samples of bone marrow taken the preceding night showed changes consistent with ITP. Harrington was immediately whisked off into the hospital under the care of Dr. Moore and Barry Wood!

This one experiment had completely reproduced the disease. Later we showed that the agent in blood which caused the disease was an antibody globulin. Our observation gave rise to the concept of autoimmunity, that people could make antibodies that caused rather than prevented disease. Harrington presented the paper at the clinical research meetings in Atlantic City in May. He was given the clean-up spot on the program, just before the morning break. The crowd was electrified with the obvious importance of the research—the first clear demonstration that the body could make harmful antibodies against its own tissues. Harrington became famous, and I, as the perpetrator of the deed, became somewhat infamous.

In June, 1951, I returned to Duke where Gene Stead had decided that I would be chief resident, a job I associated with someone older and more mature than myself. The year as Stead's chief resident absolutely set me onto the road of becoming a professor.

As chief resident I had all the responsibilities that Stead carried, but at a lower lever. My direct charge was all the interns and residents, helping them to grow and to be successful. All the patients were mine, in a sense—even private patients of the faculty, since all patients were cared for by house staff and, eventually, by the chief resident. The chief resident was constantly educating the house staff, running and planning formal conferences, being certain that house staff and students performed well on their wards and related well to their faculty attending physicians. The chief resident and assistant residents assigned to each floor met daily with Dr. Stead for Morning Report, during which each patient admitted to the Medical Service the day before was discussed. One of my informal jobs as chief resident was to spot-check with any resident whose patient history or physical exam suggested that the ward team was not handling the patient properly. The chief resident also spent much time interacting with nurses, clerks, house officers on other services, and social workers, trying to improve the care of patients by making things work more harmoniously. Much of this sort of work is termed "administration," but administration as it involves working with others was not a chore, but a learning and growing opportunity.

In short, Stead and I naturally spent hours together each week. He was con-

stantly probing ways to make patient care better, to improve teaching, to streamline some hospital function, or to make people more responsive, more effective in their jobs. We regularly discussed issues and policies and his interests certainly shaped my understanding of medical administration as a creative and enjoyable activity. He was constantly trying to define social or psychological verities out of the mass of his experience as teacher, educator, and administrator.

Later, I moved on to Yale, then to the University of Kentucky as chairman of the Department of Medicine, and finally to the University of California at San Diego. During my years at Kentucky, I saw Gene Stead usually only once a year, at the Clinical Research Meetings in Atlantic City. During those meetings, I usually managed to get Gene and Paul Beeson together along with some of their chairman colleagues: John Hickam (then at Indiana), Jim Warren (Ohio State), and Jack Myers (Pittsburgh). For the price of a few cocktails, I generated some quite remarkable stories during those nostalgic sessions. Mostly, they were outlandish stories of patients or house staff back in the old Grady Hospital in Atlanta, which was where they all worked together, or at Duke hospital where we had all been present with Gene Stead in his element. Those were golden years and I am grateful for them and for the chance they gave me to work and learn with Dr. Stead. ❑

AUTHORS

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Steady Thoughts

Reflections of Eugene Stead in Action

Francis A. Neelon, M.D.

I came to North Carolina in 1962, to serve as intern in the Department of Medicine under Eugene Stead at Duke. I was a veritable pig-in-a-poke, never having visited Durham to see or to be seen by Dr. Stead and his department. In lieu of a visit I sent a letter explaining that I had no money for the trip and skylarking about what I would like to do in medicine. I had a false confidence that I would intern in Boston or Cleveland and had no thought that I would ever come to Durham and Duke. I do not know what Dr. Stead saw in that letter or why he put my name on his list when several other department chairmen did not; even now, 30 years later, he remembers details from the letter that most department chiefs would never have noticed in the first place. Whatever the reasons, his decision (and the Hand of God) sent me to Durham. I am everlastingly grateful.

Each year Dr. Stead had offered to his chief residents the opportunity to undergo psychoanalysis with Dr. Bingham Dai. By 1969, Dr. James Wyngaarden had replaced Dr. Stead as chairman of the Department of Medicine. When he asked me to serve as chief resident, Dr. Dai had retired and analysis was no longer available; I had to figure out some other educational adventure for myself. At that time Dr. Stead was rounding every other day throughout the year on Osler Ward and I decided to attend those rounds as my own personal tutorial. I retain the memory of those mornings on Osler, not so much because of the individual patients we saw but because of the overarching lessons that Dr. Stead wove into each encounter:

- We never discussed a "case." We went always to the bedside of the patient to hear the history recounted by intern or student and to interact with the patient herself. When patients were indisposed or otherwise unavailable, we saw someone else. Often the house staff fretted at this implacable rule, wanting to talk about the "fascinating" disease borne by some recent patient who, unfortunately, could not be seen and talked with at the moment. But the implications of Dr. Stead's posture were always clear to us: we could learn about "disease" by ourselves from books and from consultation, but it was the patient and her problems that interested Dr. Stead. These were the essential elements of our time together on Osler.

- The lessons of the bedside, whatever else they were, touched two main themes: 1) How do we know what we know (and how do we know that we know it)? 2) What is the role of the doctor in this patient's illness? Dr. Stead never put things quite so baldly, but he constantly wove these themes into specific questions for specific patients. When the intern said, for instance, that he had ordered "a rose bengal scan," Dr. Stead wanted to know, "What is rose bengal?" Not "Why do you want that?" or "How will you interpret the results?" although those questions might come later. Dr. Stead wanted to know what is rose bengal itself. That seemingly simple question led our intern to a string of encounters with books and journals and experts and consultants. His conversations with Dr. Stead (and therefore, of course, with the rest of the rounding team) continued for weeks. We all learned, again, how often we used words (and ordered procedures) whose meanings we did not know and how quickly we were prepared to act as though we did.

- Dr. Stead had a sixth sense at the bedside; he could always detect the

"I retain the memory of those mornings on Osler, not so much because of the individual patients we saw but because of the overarching lessons that Dr. Stead wove into each encounter."

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moment one's attention drifted from the patient and the case presentation. There was no privilege of rank and so as soon as I, the chief resident, began to count the ceiling tiles or to think about what I had to do for the rest of the day I would hear: "Do you agree with that, Frank?" or "Does that make sense to you, Frank?" Since it was impossible to fake otherwise, I would admit my lapse of attention and then we all (interns, residents, students, nurses) would be treated to a few Steady words about how one might as well learn something as long as one was going to be standing around the patient's bedside.

- "The First Principle of Education is Repetition." One day on Osler, our rounds were accompanied by the sounds of Sesame Street, playing on the television in the background: "One, two, three, four, five, six; one, two, three, four, five, six; one, two, three..." Dr. Stead, quite independently and clearly unaware of the television, was asking, in turn, each member of the entourage: "And what is the first principle of education?" No one remembered and so Dr. Stead had to tell us, again.

- Everyone was equal at the bedside. The student nurse, the intern, the resident, the visiting professor, the chief medical resident—everyone standing with us around the patient's bed was asked to look, to think, to listen, to contribute. Any observation was considered and all were subjected to the same Steady scrutiny. The best ideas were chosen for further reflection, usually to be continued at the next meeting of the team. All that was required to join Stead's Club was clear thinking, a sense of responsibility to the truth (as best we could know it), and an open mind to learning whenever and from whomever we could. It was a revelation!

Now, for the past eight years I have worked with Dr. Stead as his associate editor for the *North Carolina Medical Journal*. That position, too, has provided more learning for me. I am always fascinated to see how different is the working of Dr. Stead's brain compared to mine. When we sit in committee meetings I try to think of how I would answer questions or respond to problems that are posed. Dr. Stead always answers in some way that I would not have thought of (indeed, did not think of). His responses are always unique, always new ways of looking at the bird in hand; I never cease to be awed at the breadth and depth and apparent preparation of his seemingly spontaneous thoughts about things.

"These years working together on the *Journal* have been a long cruise through new waters. I have been watching Dr. Stead's hand on the tiller."

These years working together on the *Journal* have been a long cruise through new waters. I have been watching Dr. Stead's hand on the tiller. I have enjoyed seeing the course he has charted for us and tried to decipher the vision that has guided his decisions about the *Journal*:

- Since this is a state journal its content should especially reflect something of North Carolina. Articles should be about or by or for North Carolina doctors and their patients.

- We are a journal for practicing doctors. We want to, and should, keep before them the examples of Medicine as a learned profession with a long and proud history of scholarship. But the thrust of the *Journal* needs to be geared to the busy practitioner. Articles need to be merciful in their brevity.

- We want to publish articles that reflect the excitement of continual learning about the practice of medicine. Utterly new observations about the world and human biology belong in JAMA or the *New England Journal of Medicine* or *Lancet*. Our purpose is the shared rediscovery of things not previously recognized or crystallized. We are a teaching journal, not a repository of biological data.

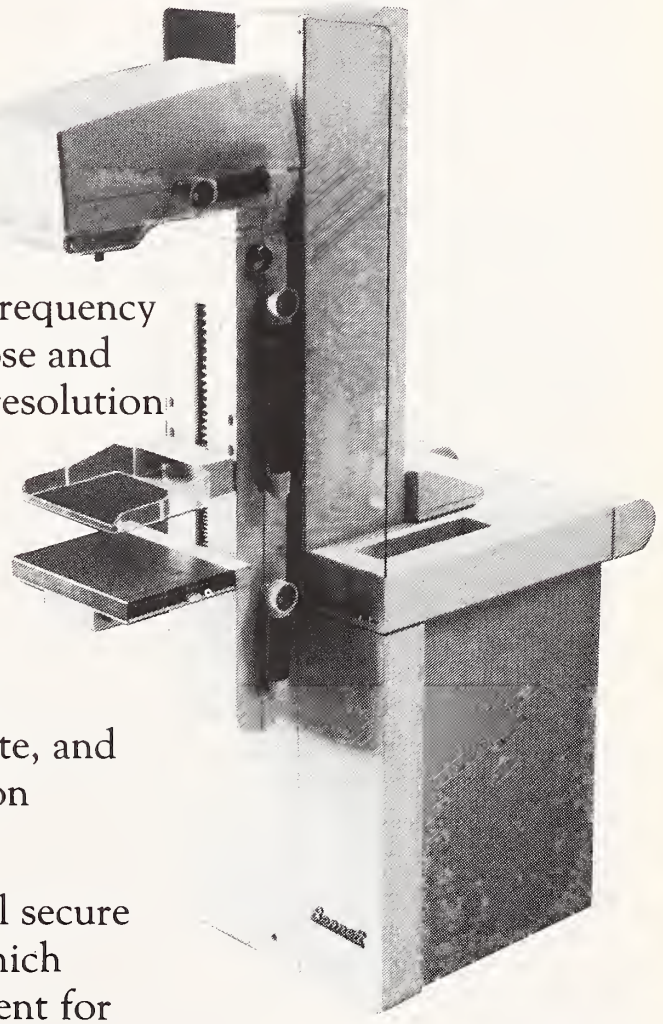
- We want to have fun. We want our papers to reflect the joy of doctoring. The written style of our articles should be light enough to do that, even when the subject is ominous or depressing.

- We should not be the "Journal of Last Resort." Papers that cannot get published anywhere else probably do not belong in the *N C Med J*. On the other hand, sometimes the editors of mainline journals are quite obtuse about what is appropriate for our readers; at times our authors have not been able to get their work published anywhere else (but should have been able). We need to recognize the difference and bring novel information to the *Journal*.

- We want to encourage the doctors of North Carolina to communicate with each other through the pages of the *Journal*. We want to encourage those outside the walls of the academic centers to write to us and for us. We do not want the *Journal* to be some mere memorandum from the Society to its members. We want dialogue and correspondence and debate and involvement.

Thirty years ago, in Boston and thinking of where I might serve my internship, Dr. Eugene Eppinger told me I should put Duke on my "list." I had never heard of Duke but, dutiful son, I complied. I came to the house that Stead built. I could not have asked for better. ❑

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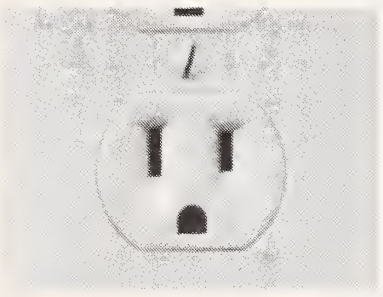


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Alien Corn in the "Big Apple"

Part I

John Borden Graham, M.D.

In earlier essays I recounted my experiences as a medical student at Chapel Hill in 1938-1940.* Successful medical students at Chapel Hill before 1952 and at Wake Forest before 1941 transferred after two years to urban schools for their clinical education. My experiences at Cornell in New York may have been somewhat different from those of my peers, since most of them transferred to the calmer and saner environments of Philadelphia and Boston, but the similarities probably exceeded the differences.

The years 1940-1946 were unique in American medical education. My third year (1940-1941) was conventional pre-World War II education. Then when the house staff became depleted by the draft and mobilization of Cornell's General Hospital Unit in my senior year, I was drafted as an acting intern. Coincident with the beginning of my regular internship in July, 1942, U.S. medical education was revolutionized. Summer vacations were abolished and supplanted by successive nine-month academic years. The fruit of this speed-up, which lasted until March, 1946, was an extra class of 5,000 M.D.s. The "up side" for the students was that they went into uniform and were exempt from the draft, received enlisted men's pay including family allowances, and paid no tuition. Many were also able to marry, a very rare occurrence among pre-war medical students, but one which has persisted. During my residency year, I carried many additional responsibilities because of the paucity of interns and faculty. Oddly, I found the conventional program boring and the unsettled times exciting and rewarding.

Before transferring to New York in 1940 I had left North Carolina's turf only four times—twice to go to boy's camp in Virginia, once to spend July 4th at Myrtle Beach, South Carolina, and once to attend the 1933 Chicago World's Fair (which featured Sally Rand, the exotic fan dancer). It is not surprising that I underwent severe "culture shock" in New York City. I managed to adapt during my four years, however, and was as paranoid and aggressive as a native when I departed. My recollections of those days have been divided into two parts: The Bad Years (as a student), andThe Good Years (as a house officer). Here is Part I. Part II will appear in the next issue of the *Journal*.

*"The Halcyon Days of Youth," Parts I and II, NCMJ 1990;51:628-34, and1991;52:44-9.

Dr. Graham is Alumni Distinguished Professor Emeritus of Pathology, University of North Carolina, Chapel Hill 27599.

The Bad Years (1940-1941)

On arrival I found that student accommodation at Cornell University Medical College consisted of a list of possible rooms in its upper East Side neighborhood. The faculty and students were unaware that four new students had transferred in—from Dartmouth, Wisconsin, Georgia, and North Carolina—and the latter were unaware of each other for many months. I found a room in a shotgun-type third story walk-up apartment two blocks from school on 68th St., rooming with an Irish family whom I never got to know and whose name I do not remember. Living alone and sharing the only bath, I did my reading at the same height above sea level as the Second Avenue elevated train passing about 10 feet away. The noise was disconcerting at first, but I was oblivious by the end of the second week.

I knew none of my classmates and only Emmet Spicer in the class ahead of mine. Emmet lived in Brooklyn and I saw him rarely, but he taught me how to get around town by subway the week before classes began. New York was a safer place in those days, and I did many things and went many places which I would not attempt today without armed guards.

I was at a complete loss the first weekend, not yet understanding that one could spend an entire weekend reading the *New York Times*, *Sunday Daily News*, *Mirror*, *Herald-Tribune*, etc. The Battle

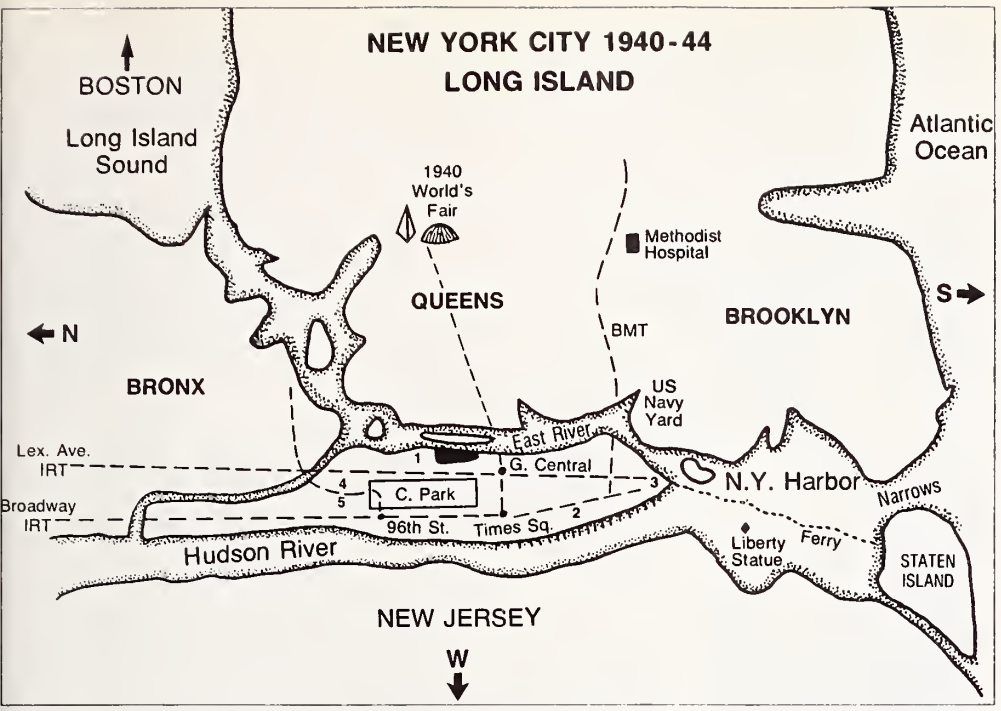


Figure 1. A map of Manhattan and environs as known by the author. The numerals 1 - 5 indicate spots mentioned in the story: (1) CUMC-NYH; (2) Milbank House; (3) South Ferry; (4) Harlem; (5) Columbia University.

of Britain was at its height in the fall of 1940, and I became a reader of *PM*, a new liberal afternoon paper edited by Ralph Ingersoll, which carried each day the box score of the planes shot down over the English Channel.

I had read the Broadway stories of Damon Runyon and thought that it might be amusing to visit Times Square to see whether "Mindy's Restaurant" actually existed. (It did, but was named "Lindy's".) Afraid to tackle the subway alone, I walked several miles from Cornell University Medical College (hereafter CUMC) to Times Square the first Saturday night and explored many other areas on subsequent weekends. Figure 1 shows the features of New York which I knew as a student.

My apprenticeship in subway-riding paid a quick dividend. The Professor of Public Health required that we visit the 1940 New York World's Fair and report on the International Health Exhibit. Although the other students in my group had been at Cornell at least two years, only I knew how to get to our destination by train.

We spent the first six weeks of the third year studying Surgical and Gynecological Pathology, and several other minor courses such as Public Health and Psychiatry. The rest of the year was devoted to clinical clerkships on the wards. (Fourth-year clerkships were spent in the clinics, Ob-Gyn the exception.) There was a short Pediatric clerkship in the third year, but most of our time was spent in Medicine and Surgery.

My first exposure to Psychiatry was embarrassing. An instructor presented a patient who did not speak or respond to questions, moved her arms rhythmically and swayed her body in a strange manner. He asked rhetorically, "What's wrong with her?" and called on me. I was completely baffled, not having had previous contact with Psychiatry. After a pause I replied, "I don't know, but I think her strange motions must be significant."

Recognizing hebephrenic schizophrenia, the other students laughed, which angered the instructor. Psychiatry was regarded by Cornell students as the least important subject in the curriculum, and he must have thought I was mocking him. I explained later that I was an ignorant transferee, and he kindly provided a reading list. I spent many hours that fall reading psychiatric journals—Psychiatry was too eclectic back then to have a textbook—and found the subject fascinating. Later I discovered that, whenever my spirits were low, I could elevate them by reading case histories of patients with serious psychiatric problems.

Each weekday the senior Professor (Head) of a Clinical department gave a Noon Lecture. Samuel Levine, the Professor of Pediatrics, was a master at this. I have never forgotten his presentation of a child with Mediterranean anemia—which I had never heard of—who had had a therapeutic splenectomy. Soon afterwards, I was asked by a Pediatrics instructor to examine a baby in the nursery with a large recent scar in the right flank. I could not find much else wrong. However, there were *no* heart sounds over the left sternum, while there were *strong* heart sounds on the *right*. I surmised that the infant had *situs inversus*, which I remembered from Embryology. This probably meant that all his organs were reversed which would mean that his spleen would be on the right. Thus a right-sided scar might have resulted from splenectomy. But why? The only indication for splenectomy that I had heard of was "Mediterranean anemia."

When the Instructor asked what I thought about the baby, I replied, "I think he has *situs inversus* and Mediterranean anemia and has had a splenectomy."

At this he blew his top, accusing me of surreptitiously reading the chart (which unknown to me was in the next room). He could not conceive of a student making this diagnosis without cheating. I don't remember how we resolved our dispute, but he departed soon afterwards for Johns Hopkins and a successful career as a pediatric endocrinologist. I have seen papers of his from time to time over the years but never bothered to read one, having written him off as an unimaginative nerd.

I decided to become a pathologist largely because of a distaste for Medicine and Surgery. This was partly due to the way third-year students were treated. At the New York Hospital (hereafter NYH)—known to students as "The Great White Palace" and shown in figure 2—surgeons regarded students as nuisances; even interns were only allowed to "hold hooks." But Surgery was different at

Bellevue. House officers being scarce, interns were allowed to operate and students "held the hooks." Not surprisingly, surgical clerkships were over-subscribed at Bellevue, and students had to be drafted at the NYH.

Ordinary lab tests on medical and surgical in-patients were done by medical students in Student Labs attached to each ward. The tests included RBCs, WBCs, Hbs, hematocrits, sed rates, urinalyses, and stool exams for blood and parasites. (Student technicians may not have produced uniformly accurate data, but using them certainly reduced the cost of medical care!) The Medical and Surgical Chief Residents made "Grand Rounds" on Sunday mornings, and woe betide an intern if a requested lab value was not on the chart. Panicked interns frantically screened charts on Fridays and Saturdays, producing long lists of procedures for students to complete before Sunday. I objected on principle to a policy which exploited students as "slave labor," but what infuriated me was the imperious and sloppy administration of the policy. I once accepted an invitation to dinner for 7 p.m. on a Saturday, and had to call my hostess repeatedly to explain that I would be late. I arrived at about 10 o'clock.

There was a senior Resident in Medicine to whom I had a particular aversion. I regarded him as an arrogant stuffed shirt. When he became Chief Resident the next year and I was a Pathology intern, I discovered how to make him froth at the mouth. We took our meals in the doctors' dining room, and I practiced arriving early and taking the seat which he regarded as his own. This was at a large round table near the front of the room, the chair so placed that he could monitor all who entered. Although he fumed, he lacked the chutzpah to demand that I sit elsewhere. As this vignette suggests, it had taken me only a couple of years to become as aggressive as a native. The civil "after you, Gaston" manners I had been taught as a child were unknown in New York. It was every man for himself, and Devil take the hindmost.



Figure 2. "The Great White Palace"—Cornell University Medical College and the New York Hospital.

Student Social Life

It has never been easy for me to strike up acquaintance with a stranger, so I made few friends in my student days. Medical students are like soldiers; they become very attached to those with whom they have suffered—Gross Anatomy being the medical student equivalent of trench warfare. But student friendships have become established by the third year, and strangers are ignored. I never had more than a nodding acquaintance with any of my classmates except Bob Hickey—until recently president of M.D. Anderson Hospital. He and I were roommates at Memorial Hospital for several months in 1941.

My best friends during my first year in New York were a quartet of women students at Columbia. They were North Carolinians and included my sister, my girlfriend from Chapel Hill, and two other graduate students at Teachers' College. They shared an apartment near 116th Street and Broadway while I lived at Second Avenue and 68th Street. The quickest affordable way to reach them was by subway: downtown to Grand Central on the East Side (Lexington Ave.) IRT, over to Times Square on the Shuttle, then uptown on the West Side (Broadway) IRT. It was while making this trip on a Saturday night soon after arrival that I was unexpectedly introduced to the night life of Harlem.

Emmet had neglected to warn me that the West Side IRT forks at 96th street. One local goes up Broadway to 242nd St., while the other turns East, passing into Harlem (#4, figure 1) and over into the South Bronx. I knew that I had been riding on the wrong train when I disembarked at 116th St. and was solicited by prostitutes on the subway platform. When I came up above ground, Lenox Ave. was wild. The street was crowded with black people, and preachers on every corner were shouting messages of salvation. I panicked. Instead of returning to the station and back-tracking, I elected to cut west on foot toward the Hudson River. I knew from the map that Columbia University (#5, figure 1) and sanctuary lay there. Walking very rapidly along Harlem's abnormally quiet cross-streets, I reached a park whose steps led steeply upward to a plateau on which

there were brightly lighted apartment buildings. No one was around, and the absence of sound was eerie. I ran up the steps as fast as I could, heaved a sigh of relief at the top, and went on to my destination.

On Monday I described my experience to a classmate who had been an undergraduate at Columbia. He was horrified, and told me that I had been very lucky.

"Someone is murdered almost every weekend in Morningside Park," he said. "When I was a freshman at Columbia, the Dean told us the first day never to go into Morningside Park after dark."

The experience taught me two important lessons about urban travel. Be very careful at night, and carefully study all the options before changing trains or buses.

Emmet and I were supported by widowed mothers, whose loads we tried to lighten whenever possible. He had obtained an out-of-hours job at the Methodist Hospital in Brooklyn which swapped room and board for emergency lab service. The idea was that I would substitute for him while he did his six-week Ob-Gyn clerkship and succeed him when he graduated. I spent several weekends and a number of nights in Brooklyn becoming less and less enchanted with the 45-minute subway ride. In the end I managed to get a similar job across the street from the NYH at Memorial Hospital, and I never revisited Brooklyn.

The Summer of 1941

This was the last summer I spent away from school and/or my job. Although I was now 23, a third-year medical student and without a car, I applied and was accepted for a summer job at a somewhat isolated tuberculosis sanatorium at Black Mountain, North Carolina. Living in the hospital, I received room, board and laundry, but no salary. The surroundings and the work were pleasant, and I was treated like the regular doctors, some of whom also lived on site. This was before streptomycin and PABA, and our treatment modalities were bed rest, pneumothorax, phrenic nerve crush to "rest" a lung temporarily, and thoracoplasty when permanent lung collapse was deemed necessary. At the daily Pneumothorax Clinic, we inserted needles into the pleural cavities of patients to maintain the positive pressure required to keep a lung collapsed, i.e., "resting." We treated about 20 patients a day.

Once a week a chest surgeon came from Asheville to operate, the most radical surgery being thoracoplasty. He was always accompanied by a certified anesthesiologist, a nattily dressed, high-living second-generation doctor with a marvelous collection of droll stories. He was often one or two sheets into the wind, and one of my duties was to assure that he did not fall asleep during an operation.

The patients were mostly working-class people—it was a public Sanatorium—and their families usually visited on Sundays. It was my duty to fluoroscope every relative who appeared. Tuberculosis is usually transmitted within families, and family members are sometimes not aware of being affected. A fluoroscope had been placed near the front door, and no relative was allowed to enter without an examination. I detected large, open cavities in the lungs of several asymptomatic relatives during my summer's stay. This was done without permission, of course, "informed consent" not yet having been conceived of.

I don't remember how I entertained myself. The hospital was several miles from town, and I lacked a car. The library was not very good, and I seldom had visitors. I think I must have been mildly depressed. I had become aware that I did not want to marry the girl who had followed me to New York but did not know how to tell her. I ignored her until she realized what was happening and broke off the relationship.

The most important thing that happened that summer was meeting the girl I was later to marry. A friend, Neil Scott, had learned that I was at the sanatorium and invited me to go to a movie in Asheville. We ran into friends accompanied by a most attractive young woman, a school teacher in Goldsboro. (Coincidentally, she was later to rent my room at my Mother's, and her rental payments helped support my education.) I saw her several times more on visits home and decided that I was going to marry her. My problem was that several other men had the same idea, and they were on the scene while I was in New York. Even more difficult, the one tipped as most likely to succeed was a close cousin. But my long-distance courtship succeeded. I suppose New York had taught me that anything is possible if you try hard enough!

Pearl Harbor and World War II

When I returned to New York in September, 1941, for my fourth year, I obtained a position at Memorial, the Cancer Hospital hear the NYH. It needed several medical students to do the "scut work" which the house staff disdained. This consisted of laboratory tests out-of-hours and assisting nurses to administer intravenous therapy. Three of us moved systematically through the hospital early each morning and late each afternoon drawing blood samples and starting infusions. One of us also tested the preoperative urine samples each night to assure that the surgeon did not operate unknowingly on a diabetic or someone with severe renal disease. In return, we were given room, board and laundry.

After finishing our rounds and eating breakfast, we crossed the street to CUMC for our fourth-year schooling, which consisted mostly of fortnightly assignments to one or another of the specialty clinics. I began with General Medicine, which confirmed for me that I did not want to practice medicine. I perceived that the administrative and social problems of patient care were much greater than I had imagined and that they would probably increase. I was really interested in pathologic physiology and mechanisms of disease, and the only avenue I perceived was pathology. Also, I knew that the pathologists in Chapel Hill would support me.

Each student was skin-tested each fall with tuberculin by CUMC's Student Health Service. Too often a tuberculous infection would be detected and the student sent to Saranac Lake for a year of bed rest. My reaction to tuberculin "converted" between my third and fourth years, which was not surprising since I had worked for three months around patients with open tuberculous lesions. There was a great hullabaloo for several days and many x-rays were taken, but no lesion was found. It is likely that I had successfully undergone a typical primary tuberculosis infection.

In 1941 the Intern Matching Plan had not yet been dreamed of, and it was each student's responsibility to find an internship. Much of the fall of the senior year was spent in the search, each institution and department making its decision whenever it pleased. Russell Holman at Chapel Hill was my advisor since I did not know the pathologists at Cornell. He had trained in the best places: a student at Vanderbilt (Ernest Goodpasture), intern at Rochester (George Whipple) and fellow at Columbia (Pappenheimer and Von Glahn). He recommended that I contact these departments and Duke. I received invitations to visit Rochester and Columbia in October, and the visits were interesting but not productive. Goodpasture at Vanderbilt and Forbus at Duke were slow to respond, so when I became a bit despondent, I contacted Dr. Reece Berryhill, recently appointed Dean at Chapel Hill. He referred me to the Boston City Hospital whose pathologists were old friends, and I had a most interesting visit in Boston.

Drs. Kenneth Mallory (with whom I later served on the national Board of Medical Examiners) and Frederic Parker were very different from the urbane, insecure, and paranoid physicians I knew in New York. They, especially Parker, were eccentric: indifferently dressed, straightforward, down-to-earth. They interviewed and gave me a three-part examination on a Saturday morning: written, oral and practical. I was handed a tray of slides to diagnose, and they were delighted when I recognized an accessory spleen. They projected color slides on a screen and asked me to describe what I saw; they also gave me some sort of written test. We parted on friendly terms, and I was told that I would hear from them later.

Returning to New York, I visited my "spy" in the Dean's Office, the sister-in-law of a doctor in North Carolina and my channel to the Dean. I reported that I had not yet gotten an internship, which led the Assistant Dean to offer me a medical internship at Long Island College Hospital. I reiterated that I was not interested in a clinical career and would continue to seek a job in Pathology. Several days later I was informed that William Dock, Professor of Pathology, wanted to see me. I visited his office, and we talked for about 15 minutes; he offered me a position, and I accepted. Sometime later I was offered a job at the Boston City Hospital, but declined.

On Sunday, December 7, 1941, we entered World War II. I was on my Ob-Gyn clerkship at the NYH and had gone over to Memorial for lunch. While I was watching the house staff poker game, someone ran in with the news that the Japanese had bombed Pearl Harbor. Although we were not to enter the European war for several days, I knew that hostilities with Germany were inevitable. I remember returning to NYH to do the daily hematocrits on the women in labor and sitting in front of the east-facing window of the lab all afternoon in a sort of "fugue state" waiting for German bombers to fly in over Long Island.

One of the most interesting experiences of my senior year was several weeks spent at the Berwind Clinic on East 106th St. It specialized in home deliveries, and students living there with one or two house officers were on call to travel by bus or foot to deliver babies throughout Harlem. We were usually accompanied by Henry Street Nurses, most efficient and dedicated midwives, who went along to keep us out of trouble. I had several interesting deliveries in Harlem: one in which the baby arrived before I did; another in which the baby was arriving as I entered the room and was delivered with my overcoat off but my hat on; another during which I delivered a breech with all the family watching; and a fourth where I stayed in the home for four days waiting for the cervix to dilate. In the last instance my only reading matter was the 1941 World Almanac!

It was about this time that I got into trouble at Memorial. Things came to a head when I was asked one evening to do an emergency RBC count on a patient being treated for leukemia. This was the first RBC count I had done in a year, and I probably did it poorly. My results led a young clinician to believe that his patient was not very anemic, regular technicians finding several days later that severe anemia was in fact present. The young physician scapegoated me, and I was accused of being either incompetent or faking the data. Then I learned that technicians in the central laboratory were suggesting that I had been "sink testing" the pre-operative urines. I may have been a poor technician, but I had not been dishonest and became highly incensed. One of the senior surgical residents, a man of the world, counselled me to cool it and try to understand that I had been impolitic in not cultivating the regular laboratory staff, in particular the female chief technician. Very wise advice, I am sure.

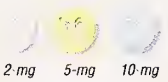
While the matter was *sub judice*, Professor Dock called to ask whether I would be willing to become an acting intern at the NYH six months ahead of schedule. One of his house officers had been drafted and the other two were on the verge. I eagerly accepted and shook the dust of Memorial Hospital off my feet, a move which completely changed my circumstances and which I have never regretted. ❑

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From HIRMIT* to the Cape May Lighthouse

Revascularization Reconsidered in Very High Risk Patients at the Duke Heart Center

Mitchell W. Krucoff, M.D., Michael B. Higginbotham, M.D., Peter Van Trigt, M.D., Sharon T. Sawchak, R.N., Robert H. Jones, M.D., Thomas C. Wall, M.D., Harry R. Phillips, M.D., Richard S. Stack, M.D., and J. Gerald Reeves, M.D.

Providing therapy for patients with severe left ventricular dysfunction and multivessel coronary artery disease remains a dilemma. Patients with such "end stage" physiology often have cardiovascular instability complicated by concomitant failure of other end organs, disqualifying many for consideration for heart transplantation. Medical therapy, the standard therapeutic approach to such patients, is associated with a 50% to 100% one-year mortality.

Despite a paucity of published data, revascularization procedures such as bypass surgery or percutaneous angioplasty are universally felt to have a significantly higher morbidity and mortality in patients with severe left ventricular dysfunction.[1-3] Conceptually, this results from the ischemic and multisystem stress produced by the procedures themselves in a frail physiological setting, generally with diffuse coronary atherosclerosis. The procedural risk profile is balanced against the benefit of revascularization, which may be unpredictable in patients with severe ventricular dysfunction, if there is a large component of irreversible myocardial dysfunction.

New nuclear and metabolic imaging techniques have produced unequivocal evidence that at least a subset of these patients may have more reversible dysfunction, or "hibernating" myocardium, than previously suspected.[4,5] New modalities of patient support during revascularization procedures may help minimize the ischemic "insult" compared to previous experiences. In the face of a dismal natural history with medical therapy, improved revascularization techniques and the awareness that such patients may be helped has provided the impetus to reconsider the potential of revascularization in these high-risk subgroups. Early experiences such as the case reported here led to the organization of a prospective, randomized High Risk Myocardial Ischemia Trial (HIRMIT). This trial represents a multidisciplinary collaborative effort between cardiovascular surgery, cardiovascular anaesthesia, and the medical and interventional cardiology programs, under the auspices of the Heart Center at Duke.

Case History

Ms. B. was a 44-year-old white female Ph.D. candidate with a history of diabetes and congenital bony deformity of the thorax. In December, 1988, she was hospitalized with anasarca and congestive heart failure. Her course was further complicated by progressive renal insufficiency and a massive pulmonary embolus. Left ventriculography disclosed severe global hypokinesis with an ejection fraction of 18% (figure 1A). Coronary angiography demonstrated a 95% stenosis of the left main coronary and total occlusion of the right coronary with left to right collaterals to the distal vessel. She had no history of angina or its equivalent. A positron emission tomographic study performed to assess myocardial viability was equivocal. The patient was felt to be a high-risk interventional candidate with a questionable possibility of benefit. Nonetheless, the patient expressed a strong desire to attempt revascularization.

Angioplasty of the occluded right coronary artery was attempted and successfully accomplished. Over the next 48 hours she diuresed remarkably, and her oxygenation improved. With this demonstration of reversible left ventricular

* High Risk Myocardial Ischemia Trial

From The Heart Center at Duke, Duke University Medical Center, Durham, 27710.

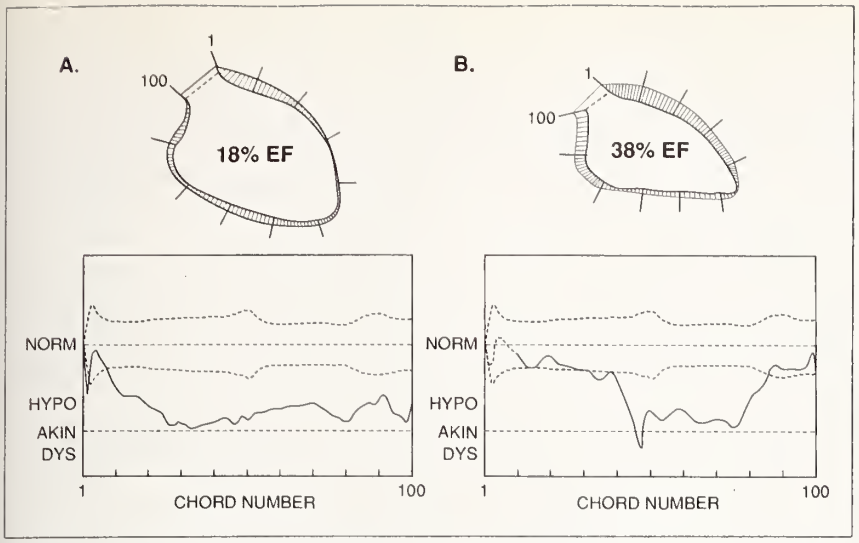


Figure 1. Tracings of right anterior oblique ventriculograms superimposing sytole and diastole at patient presentation (A) with ejection fraction (EF) of 18% and one year later (B) with EF 38%. Quantitative change from diastole to systole for each of 100 chords, oriented to the centerline axis of the ventricle, is drawn around the perimeter from the anterior wall at the aortic root to the posterior wall at the aortic root, and displayed graphically below each ventriculogram.[6]

Table 1
High Risk Myocardial Ischemia Trial (HIRMIT)

Inclusion:

1 Ejection fraction < 25% (or <30% with mitral regurgitation)
2 Known coronary artery disease
3 Symptoms or signs of ischemia
4 Unsuitable for bypass or transplant
5 Unsuitable for angioplasty

Exclusion:

1 Concomitant terminal illness
2 Severe valvular disease

dysfunction, coronary artery bypass grafting was performed. The internal mammary arteries were atrophic within the sternal deformity. Vein grafts were placed to the left anterior descending, circumflex, and right coronary arteries. The patient came off bypass on low dose dopamine, which was weaned over 24 hours. She did well, diuresed further with normalization of her renal function, and was discharged 10 days later. MUGA ejection fraction just prior to discharge was 33%. At a clinic visit six weeks later, she was doing well, with a radionuclide ejection fraction of 44%.

Four months postoperatively Ms. B. was again seen with progressive heart failure. Left ventriculography disclosed an ejection fraction of 21%. Coronary angiography showed re-occlusion of the right coronary dilatation site, and persistent 95% stenosis of the left main coronary. In addition, there was a 95% stenosis at the proximal anastomosis of the vein graft to the right coronary artery, and 95% stenoses at the distal anastomoses of the vein grafts to the left anterior descending and the first obtuse marginal branch of the circumflex. Planned as a staged procedure with support from an intra-aortic balloon pump, successful angioplasty was performed on the left main, right coronary, and all three vein graft anastomoses. The balloon pump was weaned without difficulty over 24 hours. She was able to ambulate comfortably and was discharged.

Six months later Ms. B. was seen for follow-up evaluation. She had lost 25 pounds, through diuresis and an increased activity level. She had a suntan, and was delighted to tell us that the weekend prior to this visit she had climbed all 120 steps to the top of the Cape May Lighthouse. Coronary angiography showed the native right coronary site had again re-occluded, but the vein graft to the right coronary was widely patent. In addition, the left main site and both other vein graft anastomoses to the left coronaries were all widely patent. Her ejection fraction was 38% (figure 1B).

She has continued to do well over 24 months of follow-up from the time of her initial angioplasty. She completed her Ph.D., and sent us a photo from her travels to the Galapagos Islands (figure 2).



Figure 2. Our patient, two years later, petting sea turtles in the Galapagos Islands.

Discussion

The graduated Ph.D. who climbs lighthouse stairs and pets turtles in the Galapagos Islands could not have completed her odyssey from a moribund state without the most effective possible collaboration between medical cardiologist, interventional cardiologist, surgeon, and anaesthetist. The High Risk Myocardial Ischemia Trial is the first randomized trial funded under the auspices of the heart Center at Duke.

While anecdotes provide enthusiasm for ideas, the need to responsibly gather real data is self-evident. The HIRMIT is a randomized trial design, with a pilot study currently in progress to assess the safety of the various interventions. Patients who meet the entry criteria are equally randomized to bypass surgery, angioplasty, or medical therapy. The entry criteria require not only the presence of poor left ventricular function and coronary disease, but also an unequivocal documentation of high-risk status for revascularization in the form of written rejection for surgery or angioplasty by knowledgeable physicians prior to trial entry. Patient and family attitude are also important, particularly insofar as the mortality risk of surgery or angioplasty in these patients is about 20% to 30% (vs. medical one-year mortality of 50% to 100%). The only physiological exclusion per se is the presence of severe concomitant valvular disease. Patients may also be excluded, at the discretion of the investigators, for technical reasons (such as inadequate vascular access for angioplasty, etc.) Specific entry criteria are listed in table 1.

Endpoints examined by the pilot phase are left ventricular function and mortality at six days, six weeks, six months, and one year. The safety issue hypothesis will address whether any one of the treatment arms has unacceptable outcomes over that period.

The potential positive effects of revascularization in this patient population could be significant. Ideally, improvement of left ventricular function and improved prognosis could result if there is a significant reversible component to the myocardial dysfunction. Even without improved ventricular function, however, other effects might be accomplished with revascularization.

Symptoms might be alleviated. Arrhythmogenic ischemic areas might be stabilized. The likelihood of further coronary events might be reduced, preventing further injury even in the absence of measurable improvement per se. Whether the morbidity, mortality, and costs associated with such revascularization procedures can be outweighed by such beneficial effects will be the focus of a larger trial following completion of the pilot.

Developing experience with new medical and technological advances in cardiology, surgery, and anaesthesia means not only learning to use the technology, but also exercising the wisdom appropriate to its application. Particularly in patients with advanced heart disease and a grim natural history, determining whether new techniques add significantly more than risk and cost to their course is a challenging project that draws on the expertise of all disciplines in cardiovascular care.

Inquiries regarding patient referral for the High Risk Trial may be directed to the Heart Center at Duke by contacting: Mitchell W. Krucoff, M.D., Duke University Medical Center, Hospital North, Box 3968, Durham, 27710; 919/681-5083. ❑

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1. Data on file, Knoll Pharmaceuticals
2. Standard industry new prescription audit

Please see brief summary of prescribing information on adjacent page.

V3029/4-91

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vicodin®

(hydrocodone bitartrate 5mg [Warning: May be habit forming] and acetaminophen 500 mg)

vicodin ES®

(hydrocodone bitartrate 7.5mg [Warning: May be habit forming] and acetaminophen 750 mg)

INDICATIONS AND USAGE: For the relief of moderate to moderately severe pain.

CONTRAINDICATIONS: Hypersensitivity to acetaminophen or hydrocodone.

WARNINGS:

Allergic-Type Reactions: VICODIN/VICODIN ES Tablets contain sodium metabisulfite, a sulfite that may cause allergic-type reactions including anaphylactic symptoms and life-threatening or less severe asthmatic episodes in certain susceptible people.

Respiratory Depression: At high doses or in sensitive patients, hydrocodone may produce dose-related respiratory depression.

Head Injury and Increased Intracranial Pressure: The respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions or a preexisting increase in intracranial pressure. Furthermore, narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries.

Acute Abdominal Conditions: The administration of narcotics may obscure the diagnosis or clinical course of patients with acute abdominal conditions.

PRECAUTIONS:

Special Risk Patients: VICODIN/VICODIN ES Tablets should be used with caution in elderly or debilitated patients and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, prostatic hypertrophy or urethral stricture.

Cough Reflex: Hydrocodone suppresses the cough reflex; as with all narcotics, caution should be exercised when VICODIN/VICODIN ES Tablets are used postoperatively and in patients with pulmonary disease.

Drug Interactions: Patients receiving other narcotic analgesics, antipsychotics, antianxiety agents, or other CNS depressants (including alcohol) concomitantly with VICODIN/VICODIN ES Tablets may exhibit an additive CNS depression. The use of MAO inhibitors or tricyclic antidepressants with hydrocodone preparations may increase the effect of either the antidepressant or hydrocodone. The concurrent use of anticholinergics with hydrocodone may produce paralytic ileus.

Usage in Pregnancy:

Teratogenic Effects: Pregnancy Category C. Hydrocodone has been shown to be teratogenic in hamsters when given in doses 700 times the human dose. There are no adequate and well-controlled studies in pregnant women. VICODIN/ VICODIN ES Tablets should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nonteratogenic effects: Babies born to mothers who have been taking opioids regularly prior to delivery will be physically dependent. The withdrawal signs include irritability and excessive crying, tremors, hyperactive reflexes, increased respiratory rate, increased stools, sneezing, yawning, vomiting, and fever.

Labor and Delivery: Administration of VICODIN/VICODIN ES Tablets to the mother shortly before delivery may result in some degree of respiratory depression in the newborn, especially if higher doses are used.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk and because of the potential for serious adverse reactions in nursing infants from VICODIN/VICODIN ES Tablets, a decision should be made whether to discontinue nursing or to discontinue the drug, taking into account the importance of the drug to the mother.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS:

The most frequently observed adverse reactions include light-headedness, dizziness, sedation, nausea and vomiting. These effects seem to be more prominent in ambulatory than in nonambulatory patients and some of these adverse reactions may be alleviated if the patient lies down. Other adverse reactions include:

Central Nervous System: Drowsiness, mental clouding, lethargy, impairment of mental and physical performance, anxiety, fear, dysphoria, psychic dependence and mood changes.

Gastrointestinal System: The antiemetic phenothiazines are useful in suppressing the nausea and vomiting which may occur (see above); however, some phenothiazine derivatives seem to be antianalgesic and to increase the amount of narcotic required to produce pain relief, while other phenothiazines reduce the amount of narcotic required to produce a given level of analgesia. Prolonged administration of VICODIN/VICODIN ES Tablets may produce constipation.

Genitourinary System: Ureteral spasm, spasm of vesical sphincters and urinary retention have been reported.

Respiratory Depression: Hydrocodone bitartrate may produce dose-related respiratory depression by acting directly on the brain stem respiratory center. Hydrocodone also affects the center that controls respiratory rhythm, and may produce irregular and periodic breathing. If significant respiratory depression occurs, it may be antagonized by the use of naloxone hydrochloride. Apply other supportive measures when indicated.

DRUG ABUSE AND DEPENDENCE:

VICODIN/VICODIN ES Tablets are subject to the Federal Controlled Substance Act (Schedule III). Psychic dependence, physical dependence, and tolerance may develop upon repeated administration of narcotics; therefore, VICODIN/ VICODIN ES Tablets should be prescribed and administered with caution.

OVERDOSAGE:

Acetaminophen Signs and Symptoms: In acute acetaminophen overdosage, dose-dependent, potentially fatal hepatic necrosis is the most serious adverse effect. Renal tubular necrosis, hypoglycemic coma, and thrombocytopenia may also occur. Early symptoms following a potentially hepatotoxic overdose may include: nausea, vomiting, diaphoresis and general malaise. Clinical and laboratory evidence of hepatic toxicity may not be apparent until 48 to 72 hours post-ingestion.

Hydrocodone Signs and Symptoms: Serious overdose with hydrocodone is characterized by respiratory depression (a decrease in respiratory rate and/or tidal volume, Cheyne-Stokes respiration, (cyanosis), extreme somnolence progressing to stupor or coma, skeletal muscle flaccidity, cold and clammy skin, and sometimes bradycardia and hypotension. In severe overdosage, apnea, circulatory collapse, cardiac arrest and death may occur.

Revised June 1989

Knoll Pharmaceuticals
A Unit of BASF K&F Corporation
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YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalmic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatic. It may have activity as an aphrodisiac.

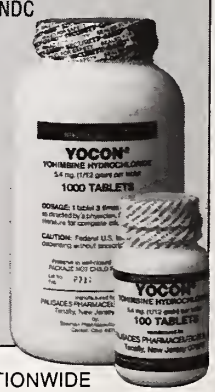
Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.[1,2] Also dizziness, headache, skin flushing reported when used orally.[1,3]

Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.[1,3,4] 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to ½ tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.[3]

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.



References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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The Wake County Medical Community Realizes Their Dream of a Center for Health Education

Arlene M. Pike and Thomas B. Dameron, Jr., M.D.

Groundbreaking for the Alice Aycock Poe Center for Health Education took place last spring in Raleigh. This non-profit school provides health education programs to about 70,000 school children per year, primarily from eastern and central North Carolina.

The story of how this $3 million dream became a reality is a story of how physicians and their spouses joined hands with dentists, educators, business leaders, and government and community leaders to get an urgent job done. They started with nothing but an idea.

How did this alliance come about? What spurred this community into action? Why were they successful? The answers, of course, lie in the people, their belief in the project, and their desire to keep going against tremendous odds.

A Plan Develops

In the early 1980s the Wake County Medical Society Auxiliary, under the leadership of president Sue Jenkins, put forth a strategy to help combat health abuses with assertive, innovative education. A vision for a center for health education grew in the imagination of auxiliary members.

Ms. Pike is from the Wake County Medical Society Auxiliary. Dr. Dameron is with the Raleigh Orthopaedic Clinic.

The Wake County Medical Society Auxiliary gave birth to more than an idea. From its ranks came the leadership that would forge a corporation from a committee, educate the public about the need, recruit a board that would operate the organization, and build the bridges to other community leaders who would help raise the money. Four auxiliary presidents would serve as president of the new organization: Faye Miller, Dianna Burroughs, Helen Majors, and Shirley Lucey. Virginia Scanlan, a former auxiliary legislative chairman, would also serve a term as health center board president, and then would lead the $3 million campaign with Shirley Lucey. To establish this new institution, many other auxiliary members would serve in leadership roles in the areas of finance, public relations, development, personnel, building, and exhibits. Anna Hattaway, also a former auxiliary president, will be president of the board when the Center opens.

After garnering support from the Wake Medical Staff Foundation and a group of interested businessmen, by April, 1984, the medical auxiliary members had raised almost $100,000 to build and operate a seed exhibit featuring the cardiovascular system. The North Carolina Museum of Natural Sciences became the home for this first endeavor.

The success of the exhibit, combined with the growing interest of individuals throughout the community, took the vision in a new direction. In 1985, the Center for Health Education was incorporated. The non-profit corporation that emerged became a collaboration of public figures and private citizens committed to improving the health and well-being of the people of North Carolina.

The belief that "the choice we make about our health affects our future" gave the vision a purpose. The goal was to establish a unique center to fulfill that purpose. In December, 1987, Jean Poe Smith and the late Gordon Smith, Jr., donated the land that brought the vision a step closer to reality. It was appropriate to name this center for Alice Aycock Poe, daughter of North Carolina Governor Charles B. Aycock, the pioneer known as the father of public education in the state.

The Work Begins

The task at hand was to demonstrate the need and enlist the support of as many community leaders as possible. Recent studies provided the ammunition that motivated individuals to become involved with the project. It is hard for a parent, grandparent, aunt or uncle, whatever his or her background or profession, to feel comfortable with the following statistics:

- Over 20% of eleventh and twelfth graders report getting drunk on at least a monthly

basis and admit to driving while drinking.
- By age 16, almost half of our teenagers are sexually active.
- By age 19, 25% of all girls have had one pregnancy.
- Almost half of our teenagers (ages 12 to 17) have tried tobacco; about 10% of the 15- to 17-year-olds smoke a pack a day or more.
- One-third of the students in grades 10 to 12 are regular marijuana users. Almost 5% use cocaine and 2% use crack.
- Nine students out of every 1,000 in grades 7 to 12 are injecting illegal drugs and are at a very high risk for contracting AIDS.

It is equally difficult for the medical profession, government and business to ignore the escalating costs associated with irresponsible lifestyle choices made by patients, constituents, and employees. For example:

- Care for a low birth weight infant, many of whom are borne by teenagers, can cost over $50,000 in a neonatal intensive care unit.
- Smokers cost the employer up to $4,500, more annually in health care expenses than nonsmokers.
- The public cost of teenage child-bearing in 1986-1987 in North Carolina was $233 million in medical care, food assistance and welfare.

A Proven Concept

Creating a center for health education where children could come for classes in general health, nutrition, substance abuse, family life education, and dental health was a new concept for the area around Wake County. Such centers were already operating successfully in Illinois, Indiana, Pennsylvania and South Carolina, and after examining those operations, the board of directors determined that the most successful approach would be to use them as models.

The Poe Center was to be a 13,000-square-foot facility with five electronic "classrooms of the future," a markedly different learning environment from the normal school experience. Staffed by teachers trained to encourage cooperative learning, the Center was to serve approximately 70,000 children annually from 32 counties within "school bus travel distance" (approximately a 70-mile radius from Wake County).

The curriculum was to address the needs of school children in Grades K through 12 from the service area. It was to meet the requirements of North Carolina's Basic Education Plan, which mandates that a "Healthful Living Component" be taught at every grade level, and that AIDS education be implemented in the seventh grade. The overall goal of every aspect of the curriculum was for children to learn responsibility for the choices they make about health behaviors.

Building a Constituency

With the need identified and the parameters of the project defined, the next step was to enlist broad-based community support. However, achieving this required an extra commitment on the part of the medical professionals.

The message from business came in the form of a challenge to the medical community. The gauntlet was picked up by W. Blake Garside, M.D., Vartan Davidian, M.D., and R. Lynn Wiggs, D.D.S. These doctors, with the help of other physicians and dentists, developed a plan for a medical and dental campaign to begin several months prior to the community kick-off. Their goal was to raise $1 million from physicians, dentists, hospitals and medical foundations.

The theme for the entire campaign became "Our Health ... Our Future." Campaign co-chairwomen Shirley Lucey and Virginia Scanlan recruited Thomas B. Dameron, Jr., M.D., for the leadership role of campaign chairman. With the medical campaign off to a $400,000 head start, together they were able to enlist the help of the corporate community. Major gifts began with pledges from Burroughs Wellcome Co., Kerr Drug Stores; Wake County; First Citizens Bank and Trust; and The Kate B. Reynolds Health Care Trust. In one year, $3 million was raised, over $1 million from the medical community.

The Work Continues

With construction of the building almost complete, an executive director and lead health educator in place, and the curriculum in development, much remains to be done. Plans are underway for an annual giving program to supplement operational costs, a planned giving program to build a million-dollar endowment, and extension of fund-raising efforts into the 32-county service region.

Establishing the Poe Center for Health Education is an ambitious undertaking. The concept of a special teaching center focused solely on health education has been growing over the past few years and is proving extremely effective. Centers of this kind can deliver appropriate health education that public schools often cannot provide due to financial restrictions. That is why a public-private collaboration of efforts is a superior way to make a difference in health education.

The timing has never been better. Many of the diseases that are killing us today are directly related to our personal day-to-day choices and decisions. We all need convincing. We need self-examination and understanding. The Poe Center for Health Education can provide a major step in the direction of more healthful behaviors and responses to human health needs. ❑

NEWSBRIEF

RETIREMENT WEALTH MANAGEMENT INFORMATION

A Monthly Service to NCMJ Readers
by
BARON BENEFITS MANAGEMENT, INC.

When is it bad to do well?

In a recent "*Private Letter Ruling*", IRS disqualified the profit sharing and money purchase pension plans maintained by a group of doctors.

Why? Although the plans did not permit individuals to direct their own investments, the physicians instructed the investment committee on how their (the physicians') investments should be made. The doctors' investments did a lot better than those selected for staff employees. (Up to 41% return for the doctors, an even 6% return for the others). IRS held that the plans were in violation of regulations which prohibit a plan permitting broader investment discretion to the highly-compensated owner-employees than for other employees.

The message here is perfectly clear. It didn't matter that the doctors probably took greater risks with their investments. It would not have mattered had the physicians' investments done worse than the other employees'. Where the rank and file employees were not offered the same privileges, the plan was not "qualified."

Disqualification of a plan is a nasty process, involving back taxes, loss of deductions, penalties and seemingly endless paperwork. How to avoid it? Get involved with professionals who know the laws and can provide appropriate administrative machinery.

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Edward C. Halperin, M.D., Book Review Editor

***The Long Journey: Personal Stories of Living with Arthritis*, by William E. Byrd, M.D. Huntington, West Virginia: University Editions, Inc., 1990.**

Reviewed by James L. Travis III, Ph.D., Department of Pastoral Services, Box 3112, Duke University Medical Center, Durham 27710.

From his practice as a clinical rheumatologist, Dr. William Byrd has assembled vignettes for patients with arthritis to address their need for information and support. The title, *The Long Journey*, provides an obvious clue to his perspective on arthritic disease processes as chronic and debilitating, confronting his patients with extraordinary challenges simply to survive. Further, his devotion to his patients and his comprehensive care for them is evident throughout this book. Dr. Byrd clearly has a passion to tell the story of these suffering people that grows out of his compassion for them.

Guided by observing his patients who experienced long waits in the clinic on a military base, and noting how they seemed to find relief and affirmation in the interaction in that waiting room "community," Dr. Byrd concluded a principle that prompted this book. Simply put: "People heal people and physicians simply assist and comfort in the long journey of chronic illness and deformity." Therefore, his purpose in this book is to provide some assistance and comfort in sharing the stories of pain and perseverance, of shattered hopes and renewed efforts, of unanswered questions and resilient faith of some of his patients. In this intent he seems both to succeed and to fail.

His success lies in presenting in clear and readily understood terms some of the more significant aspects of several types of arthritis. For the lay person it is possible to gain a working understanding of the central dynamics of the medical as well as the social/emotional/spiritual components of these types of illness. Further, since he clearly chose some situations that were the proverbial "worse case scenarios," the book may serve the purpose of demonstrating that there is always someone in worse condition. This he understood to be a primary factor in the upbeat atmosphere in the military clinic.

I think, however, that the success of the book will be more apparent with family and friends of patients with arthritis than with the patients themselves. I would recommend it as a resource for the support systems of patients, with the caveat that families and friends not expect their patients always to be as tough or upbeat as the patients in the book.

This I see as the major shortcoming of the book, namely, it probably will not be that directly helpful to the patients. A telling reason for this conclusion lies in Dr. Byrd's earlier experience in the military clinic. His patients seemed to find support and encouragement from other patients, not so much from reading literature, even books as informative as this one. Few references in these cases indicated that reading was a primary vehicle for gaining courage and strength to endure.

Further, there seems to be an unrealistic quality in the if not "happy endings," then overwhelmingly positive outcomes in these situations. I can readily imagine patients becoming intimidated at how bravely these model patients faced their massive problems.

Finally, while the basis on which these patients coped with the painful and debilitating aspects of their disease seemed random and patternless, some form of stoicism characterized most of their responses. Now stoicism may be a workable way of coping, but the primary question, which never is clearly addressed, is how does the patient get to that brave posture in life? Is it religion, family support, a dedicated and competent physician, or some vague resolve to pull oneself up by the bootstraps? Who knows—it may happen in a crowded and time-devouring waiting room, with few books but many fellow travelers on "the long journey."

***Practical Pointers for the Physician Practicing Primary Care.* 1990 Journal Abstracts, edited by Richard T. James, Jr., M.D. (217 Travis Ave., Charlotte 28204.)**

Reviewed by Robert A. Gutman, M.D., Durham Nephrology Associates, P.A., 2609 North Duke Street, Durham 27704.

This is a loose-leaf compilation of interesting information and trivia. The optimistic editor apparently has a mind like a dictionary and hopes that his audience can learn from a staccato presentation of highly distilled information. The distillation is so thorough that it almost comes out dry. At least to this reader. My greatest difficulty with this is that it lacks a useful index. There is something called "Highlights-Index 1990," but this is not in al-

From the Division of Radiation Oncology, Box 3085, Duke University Medical Center, Durham 27710.

phabetical order. Instead it is grouped into broadly and poorly defined categories that are listed in the following order: Alcohol, Environment, Practical Concerns, Substance Abuse, Tobacco, Bone/Joint/Muscle, Osteoporosis, Cardiovascular-General, Arrhythmia, and so on. If I were looking for something of importance I would have a very difficult time finding it.

There are, to be sure, some very interesting things in here. In order for it to be meaningful to me I would have to enjoy reading this kind of presentation and then be able to remember all these facts. This reader cannot do that. On the positive side, apparently each month the author provides an update with approximately 15 new items of information. I suppose if one scanned this table of contents each month, one might find something interesting and useful at the moment. For example, in July, 1990, there is a good discussion on the use of adenosine for paroxysmal supraventricular tachycardia, and another article reminding me that progesterone suppositories do not work for PMS.

In summary, I could not recommend this list of practical pointers very strongly except for those who enjoy reading in this fashion.

***The Higher Ground: Biomedical Ethics and the Physician Executive.* Edited by: Donald H. Hofreuter, M.D. Tampa: American College of Physician Executives, 1991.**

***Guidebook for Medical Society Grievance Committees and Disciplinary Committees.* Prepared by the Office of the General Council of the American Medical Association. Chicago: American Medical Association, 1991.**

Reviewed by Edward C. Halperin, M.D., Book Review Editor

Sometimes I think that all the academic chairpersons of Departments of Philosophy, at all our universities, need to pay medicine a debt of gratitude. I have a sneaking suspicion that the teaching of philosophy was becoming stale by the 1960s—relegated to historical survey courses of the great thinkers and to dealing with the necessary but troublesome problem of distraught freshmen who want to decide whether or not there is a Supreme Being. Then, to the rescue of Philosophy, came Medicine. All of a sudden the biomedical revolution presented philosophers with a new set of problems: abortion, euthanasia, artificial life support, fetal research, and so on. The publishing industry, naturally, was quick to follow up on the trend and has supplied us with a surfeit of medical ethics textbooks and monographs.

A recent foray into the world of biomedical ethics comes from the American College of Physician Executives and their sponsorship of *The Higher Ground.* This 86-page paperback contains 13 chapters that touch upon some of the usual concerns of medical ethics, i.e., "prolonging life or prolonging death," a conceptual framework for medical ethics, and the work of medical ethics committees. There are also some chapters of particular interest to physician executives, such as "The Ethics of Medical Entrepreneurism," or "Medical Administrators and Bioethical Dilemmas." The book is superficial, poorly edited, and really of little use. It strikes me that many of the chapters were quickly prepared, not carefully edited, and not well drawn together. There are more than enough books in medical ethics—pass this one by.

The *Guidebook for Medical Society Grievance Committees and Disciplinary Committees*, on the other hand, is simply outstanding. Anyone who has ever served his or her relatively thankless term of duty on a medical society grievance or disciplinary committee knows the troublesome questions associated with being "at sea" on such a committee: What are my responsibilities? What's my authority? How can I really discipline someone? Committees grope their way through these questions and, with whatever strength they can muster, do the best they can. This 36-page guidebook provides clearly stated guidelines for the operation of a medical society grievance committee. The authors have also included model forms and letters for the use of the committee. This monograph will clearly need to be on the shelf of every member of such committees, and the AMA is to be thanked for providing the little book.

***Dancing Against the Darkness,* by Steven Petrow. Lexington, MA: Lexington Books, 1990.**

Reviewed by David Jay Weber, M.D., M.P.H., Division of Infectious Diseases, Department of Medicine, the University of North Carolina, Chapel Hill 27599-7030.

The Centers for Disease Control estimates that between 56,000 and 71,000 cases of the acquired immunodeficiency syndrome (AIDS) will be reported in 1991. By 1993, between 61,000 and 98,000 new cases will be reported, with between 53,000 and 76,000 deaths. Given the scope of this pandemic, it is not surprising that in 1990 over 3,300 articles were listed in Index Medicus whose main focus was infection with the human immunodeficiency virus (HIV).

Since the disease was recognized in 1981, great strides have been made in understanding the basic biology of HIV, in the epidemiology and clinical features of HIV infection, and in developing effective therapies for treating both HIV infection and its associated opportunistic infections. However, too often physicians and other health care personnel forget the personal and societal impact of this devastating illness. *Dancing Against the Darkness* is an engrossing and disturbing account of the personal impact of HIV infection told by recounting the case histories of six victims of AIDS.

From numerous interviews Mr. Petrow has chosen to focus on six case histories of patients afflicted with AIDS: the Ray family, with three infected hemophiliac children; Janice Campion, a former intravenous drug user; Meredith Miller, the sexual partner of an intravenous drug

user; Jennifer Greene, the long-time wife of a man who died of AIDS; and Eddie Mohr, Bill Cox and Michael Stone, gay men. The stories of these individuals are told in a straightforward and sensitive way. The use of the victims' own words and letters adds to the impact of these stories.

Several common threads run throughout these case histories. First, AIDS is different from other fatal diseases because of the way society views its victims. Reactions of co-workers and the community often include fear, overt hostility, and officially sanctioned discrimination. Even enlightened persons, who realize that HIV infection is only acquired by intimate sexual contact or parenterally from contaminated blood or sharing of needles, often feel that co-workers and community fears require efforts at "damage control" and maintaining a veil of silence.

Second, the medical community has failed to develop an effective strategy for preventing HIV infection and caring for its victims because of the lack of political support. Fragmented health care, lack of access to appropriate health care, and lack of home services to allow AIDS patients to remain functional are common.

Third, society, including friends and families, has often grouped AIDS victims as either innocent (i.e., infection acquired by contaminated transfusions or factor concentrates) or guilty and deserving of infection by virtue of their lifestyle (i.e., gay men or intravenous drug users). For no other disease does society so vigorously enforce this stereotype. While we all realize that smokers are at a much higher risk of lung cancer and persons who fail to wear seat belts are at increased risk of severe injury and death following an automobile accident, society in general does not ostracize or penalize these persons.

Finally, each victim approaches his disease in both common and highly personal ways. Failure to believe that one is at risk for acquiring HIV is common even among members of high-risk groups, especially for the young. Denial both of risks and of initial symptoms is common. The importance of supportive friends and family is crucial in maintaining dignity and allowing patients to deal with their illness. As these case histories illustrate, some persons respond to their illness with calm acceptance and concern for sexual partners, and become or remain productive members of the community. Others maintain their denial and may continue behaviors which place other persons at risk of acquiring HIV infection.

Dancing Against the Darkness is highly recommended for all health care personnel, since AIDS will touch all our lives both personally and professionally. Although not a goal of the author, this book should sound a clarion call for health professionals to take the lead in pushing society to develop a comprehensive humane approach to the prevention of HIV infection and the care of its victims. ❑

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Health Watch

VOLUME 52 / NUMBER 12 / DECEMBER 1991

Medicare

BENEFITS AND SUPPLEMENTAL COVERAGE

Medicare was established to help people pay for their health care when they became 65. It was never intended to pay all the charges a person may accumulate in being treated. Under the two parts of Medicare (Part A-Hospital Coverage, Part B-Medical Insurance) many benefits are offered and many services are covered. In this issue we will review these and also look at additional insurance coverage to help pay for the services not covered by Medicare.

PART A

Medicare hospital insurance can help you pay for necessary care in a hospital, skilled nursing facility, hospice program and home health program. Only 90 days of inpatient hospital days are covered during a benefit period (spell of illness), and there are 60 additional lifetime reserve days that can be used only once.

A spell of illness begins when you enter a hospital for inpatient care and ends 60 days after discharge from the hospital or a skilled nursing facility. You must pay a deductible for each spell of illness. This deductible is set every January. Below is a summary of the four types of services covered by hospital insurance.

Inpatient Hospital Care

- Room and board in a semi-private (two-to-four bed) room in an approved hospital.
- Laboratory and x-ray service included in your hospital bill.
- Regular hospital nursing services.
- Drugs furnished by the hospital during your stay.
- Blood and packed red blood cells, starting with the fourth pint. You must pay for the first three pints of blood unless it is replaced (for example, someone donates it for you).
- Charges for operating room, recovery room, intensive care and coronary care units.
- Medical supplies such as casts, splints, surgical dressings, etc.
- Use of appliances such as a wheelchair.
- Rehabilitation services such as physical, occupational and speech therapy.

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Inpatient Care in a Skilled Nursing Facility

Medicare Part A can help pay for certain inpatient care in a Medicare-participating skilled nursing facility following a hospital stay. Your condition must require daily skilled nursing or skilled rehabilitation services which, as a practical matter, can only be provided in a skilled nursing facility, and the skilled care you receive must be based on a doctor's orders.

Medicare will pay for up to 100 days of post-hospital skilled nursing facility care per spell of illness. You must pay coinsurance of $78.50 per day from the 21st day of skilled nursing facility care through the 100th day. The first 20 days of covered skilled nursing facility care are paid entirely be Medicare Part A.

Home Health Care

If you need skilled health care in your home for the treatment of an illness or injury, Medicare pays for covered home health services furnished by a participating home health agency. A home health agency is a public or private agency that specializes in giving skilled nursing services and other therapeutic services, such as physical therapy in your home.

A doctor must determine that you need part-time skilled nursing care or physical, occupational or speech therapy and that you are confined to your home. The physician is required to set up a home treatment plan. All covered services are paid in full. A maximum of 21 consecutive days was allowed in 1991 for home health care services.



Hospice Care

A hospice is a public agency or private organization that is primarily engaged in providing pain relief, symptom management and supportive services to terminally ill people. It includes both home care and inpatient care, when needed, and a variety of services not otherwise covered under Medicare. Under the Medicare hospice benefit, Medicare pays for services every day and permits a hospice to provide appropriate custodial care.

Hospice services covered by Medicare include nursing, medical social services, physicians' services, counseling services, short-term inpatient care, medical appliances and supplies (including drugs and biologicals), home health aide services and physical therapy services furnished by an approved hospice. The hospice's medical director or another physician on its staff and your own physician (if you have one) must certify that you suffer from a terminal illness. This must be done either verbally within two days and in writing within eight days or in writing within two days. You must elect to receive hospice care instead of most other Medicare benefits (except coverage of your attending physician).

PART B

Medicare medical insurance can help pay for doctors' services, outpatient hospital care, outpatient physical and speech therapy, home health care and many other services and supplies not covered by Medicare hospital insurance. There is a monthly premium for Medicare Part B coverage. This premium is set annualy and takes effect each January 1. In 1991 this amount was $29.90.

You are entitled to receive benefits only after you have paid $100 in "reasonable charges" in each calendar year — your deductible. After you meet your deductible, Part B medical insurance will generally pay 80 percent of the "reasonable charges" for any additional covered services you receive during the rest of the year.

Following is a summary of services covered by Part B medical insurance.

- Physicians' medical and surgical services, whether rendered in the office, hospital, your home or anywhere in the United States.
- One routine or screening Pap smear every three years. Women considered at high risk for cervical cancer are allowed more frequent Pap smears.
- Optometrists' services that would be covered when provided by a physician. However, the optometrist must be legally authorized to provide those items and services in the state in which they are provided.

- Pneumococcal and hepatitis B vaccines.
- Injectable drugs for the treatment of bone fractures for individuals with diagnosed postmenopausal osteoporosis.
- Mammography screening subject to the following frequency limitations: biennial screening for women over age 65; biennial screening for women of age 40 to 49 who are not at high risk for breast cancer; annual screening for high-risk women between age 40 and 49 and for all women between age 50 and 64; one baseline screening for women between the ages of 35 and 40; no coverage for women under 35 years of age.
- Dentists' services that would be covered when provided by physicians (i.e., certain types of dental surgery).
- Laboratory services provided in physicians' offices, independent laboratories and hospital outpatient departments.
- Other services and supplies related to diagnosis and treatment, including x-rays, medical supplies, drugs (but only those you cannot give yourself — that is, drugs taken with the direct assistance of a doctor or other health professional), electrocardiograms and prosthetic devices such as artificial limbs or eyes.
- Immunosuppressive drugs for up to one year after an organ transplant.
- Outpatient hospital care in emergency rooms and clinics. Payments may be limited for nonemergency services provided in emergency rooms and clinics.
- Durable medical equipment for home use, such as hospital beds, oxygen, kidney dialysis systems, etc.
- Outpatient physical and speech therapy when prescribed by a physician or rehabilitation service from an approved outpatient rehabilitation center.
- Ambulance service to nearest appropriate facility when other methods of transportation would be medically unsafe.
- Blood and packed red blood cells received as an outpatient or as part of the covered services, starting with the fourth pint in a calendar year.
- Home health visits by an approved home health agency. A doctor must determine that you need part-time nursing care or occupational, physical or speech therapy. Medicare pays 100 percent of the "reasonable charge."
- Services provided by a physician assistant in a hospital or intermediate care facility that would be covered if provided by a physician or that are provided under the supervision of a physician. The physician assistant must be legally authorized to provide those services in the state in which they are provided.
- Services of certified nurse-midwives, clinical psychologists, nurse practitioners, clinical nurse specialists and social workers are covered.

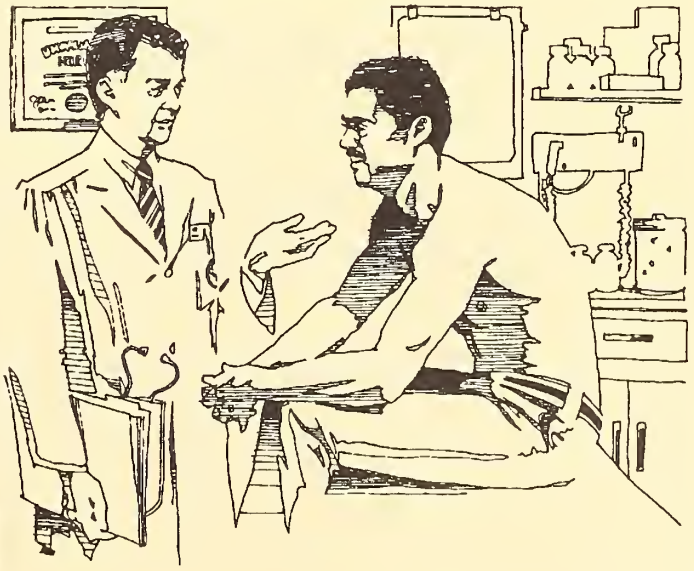
Flu shots are covered in 20 states on a demonstration basis. Check with your physician on your local coverage.

"Medigap" Insurance?

"Medigap" insurance is a supplemental insurance policy offered by private insurance companies to fill the "gaps" not covered by Medicare. It can pay many of the bills that Medicare doesn't cover. The best way for a Medigap policy to benefit you is to pay all or part of the deductibles and copayments required by Medicare.

Not all so-called Medigap policies meet the minimum standards set by states — only those that contain the words "Medicare supplemental insurance" do. When shopping for Medigap insurance:

- Make sure your agent explains exactly what coverage you have now and what your new policy will cover.
- Because insurance companies will be raising their rates to include catastrophic benefits at different times, be careful how you compare rates and policies. Make sure the Medigap policy rates quoted include the increase for catastrophic coverage.



- Be careful to check on waiting periods for pre-existing conditions before changing policies.
- In most cases, one policy should be all the supplemental coverage you need.
- Check out the insurance company with your state insurance department and local Better Business Bureau.
- Never make a hasty decision regarding an insurance purchase.

Appeal

You have the right to question payment decisions under Medicare hospital or medical insurance. To request a review of your claim, contact your local Social Security office or the insurance organization shown on the decision notice you receive. It is important that you file for a review no more than six months after you receive the notice.

If after a review you still disagree with the decision (and if the amount in question is $100 or more), you may request a formal hearing. If the amount in controversy is more than $500, you may bring the dispute before an administrative law judge. If the amount is more than $1,000 a judicial review is allowed. ❑

1992

January, February
.....Traffic Safety

April, May, June
.....Seizure Disorders

July, August, September
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October, November, December
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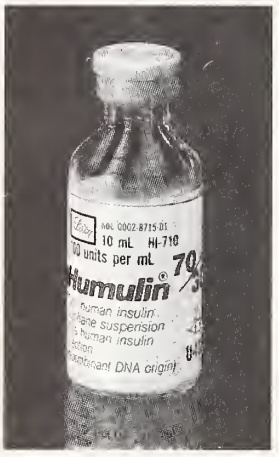


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Underrecording of Child Abuse and Neglect Fatalities in North Carolina

Marcia E. Herman-Giddens, PA, MPH

Children's deaths from abuse and neglect warrant special attention, not only because they are preventable, but because of the societal significance. In the past century, injury, both intentional and non-intentional, has become the leading cause of childhood deaths.[1,2] Although most causes of death in childhood continue to decline, homicide rates for children have doubled during the last 25 years, and these figures are undoubtedly low, as several studies of childhood homicides point out.[1,3,4] Even so, mortality data from 1980 to 1985 show that the leading cause of injury death among infants under one year of age is homicide.[5,6]

Accurate recording of child maltreatment fatalities is crucial for prevention and monitoring efforts. I undertook this study to determine the extent to which child deaths from abuse and neglect might be underrecognized and underreported in North Carolina, and the extent to which statistics on reported deaths might be incomplete and inaccurate.

I traced a sample of child deaths where medical personnel suspected abuse or neglect to be possible factors. I sought to learn how state agencies and health care providers responded to these deaths. My goals included understanding how the systems work at present, understanding how cases are missed when statistics are compiled, and assessing the need for a statewide child fatality review commission.

Definitional problems are a major impediment to accurate study and discussion of violence against children. There is no consensus on the meaning of such terms as child abuse, child abuse fatalities, or even homicide. Medical literature generally defines child abuse broadly to include physical, sexual, or emotional injury or abuse to a child from acts of commission or omission by the parent or caregiver. Neglect is considered to be the failure to provide adequate nutritional, emotional, physical, and medical support when such support is available.

The State of North Carolina defines child abuse, including physical, sexual and emotional abuse, moral turpitude, and neglect, and the required relation of the perpetrator to the child victim, in statutes 7A-517(1,5,21). A physical injury inflicted by non-accidental means must cause or create a substantial risk of death, disfigurement, impairment of physical health or loss or impairment of function of any bodily organ, and the perpetrator must be a parent or caretaker with a relationship to the child as defined by General Statute 7A-517(1,5).

Methods

I analyzed all 10 cases of child fatalities occurring in a major medical center in North Carolina in 1988, in which abuse or neglect was known or suspected by health care providers as a possible factor in the death. The children had resided in seven different counties. Medical records, death certificates, and reports of autopsy (when performed) were reviewed in all cases. All Medical Examiner cases were discussed with the Chief Medical Examiner. When available, information was obtained from other death response agencies, including law enforcement, emergency medical teams and the state Vital Records Office. Requirements of confidentiality, especially in the area of child protective services, hampered the ability to track certain information.

To ascertain whether the children had received services, I obtained basic child protection service information through the Central Registry on Child Abuse and Neglect (with assistance from the North Carolina Division of Social Services, Department of Human Resources). In 1988, only substantiated reports were forwarded to the Central Registry. Cases might not be in the registry if not accepted, if not substantiated, if the fatally injured child had no siblings, or if the local office failed to forward the record. Under current North Carolina law and policy, departments of social services have no authority or responsibility to investigate suspicious deaths, although there is policy outlining the agency's responsibility for assessing risks to surviving siblings. I assessed the agencies' involvement with the children's deaths, and noted whether and how the deaths were recorded in state statistics.

From the Department of Pediatrics, Duke University Medical Center, Durham 27710, and the NC Child Advocacy Institute, Raleigh. The NC Child Advocacy Institute published the complete study (March, 1991, monograph).

Results

Cases

Medical records documented that 9 of the 10 cases had been reported one or more times to Child Protective Services for suspected abuse or neglect. Cases 2, 6, 7, 8, and 9 were reported more than once. Case 8 had had three prior substantiated abuse and/or neglect reports. The State Central Registry on Child Abuse and Neglect showed only three of the nine cases (2, 8, and 10) as having had child protective service involvement (table 1). Nine cases had been referred to the Medical Examiner, and seven had been autopsied. Families of the two cases not autopsied had received child protective services, according to medical records. In six of the seven autopsied cases the autopsy record contained evidence of prior abuse or neglect. Police and/or child protective services investigations apparently did not occur in five cases; 3, 4, 5, 9, and 10 (probably for reasons discussed above, including failure to substantiate or lack of authority to investigate deaths).

In none of the six children with evidence of old abuse or neglect on autopsy was this indicated on the death certificate (primarily because there is no place for such notation on the death certificate).

The manner of death for the nine Medical Examiner cases is shown in table 1. One of the two deaths designated "not determined," and both of those designated as due to "natural causes," had pre-existing evidence of abuse or neglect. Two of the cases (2 and 8) were among the six fatality cases recorded statewide by the NC Child Abuse Registry in 1988. Only one of the deaths met coding requirements for "child battering" (table 2).

Table 1. Cause of death, manner of death, autopsy evidence of prior abuse or neglect and child protective service status at child's death.

Case	Cause of Death	Manner of Death	Evidence of Old Abuse or Neglect at Autopsy	CPS Involved[1]
1	Shaken Baby Syndrome	Not Determined	None	Yes[2]
2	Assault	Homicide	Scabbed Areas Old Burns	Yes
3	Congenital Fatal Disease	N/A	N/A[3]	Yes
4	Lung Problem	Natural	30-day-old Posterior Rib Fractures	No
5	Chemical Aspiration	Accident	N/A	Yes[2]
6	Shaken Baby Syndrome	Homicide	Undernourished	Yes[2]
7	Head Trauma	Homicide	Healing Abrasions Old Fractures	No (earlier report not accepted)
8	Forced Ingestion	Homicide	Old Bruises Healing Lacerations	Yes
9	Intestinal Trauma Shock	Not Determined	Medical Neglect	Yes[2]
10	Lung Problem	Natural	N/A	Yes

[1]Child Protective Services. The agency may have received the report, thus having an open case because of but not prior to the lethal event in some cases.
[2]Medical records information indicated CPS report and/or involvement; however, no indicator of such appeared in the Central Registry.
[3]Not Applicable; no autopsy done.

Table 2. State statistics on the 10 child fatality study cases

Case	Death Recorded in Child Abuse Registry[1]	Death Recorded as Child Battering[2]
1	No	N/A[3]
2	Yes	No
3	No	N/A
4	No	N/A
5	No	N/A
6	No	No
7	No	Yes
8	Yes	No
9	No	N/A
10	No	N/A

[1]Data recorded by Division of Social Services
[2]Cases meeting coding requirements by Vital Records coded under E Code 967 "Child Battering and other maltreatment" in state mortality statistics; applies only where homicide is manner of death. (The state total recorded for 1988 was 3.)
[3]Not applicable

Case Reports

In order to preserve anonymity and confidentiality, the children described are not identified by age, sex, race or locality.

Case 1. This previously well infant had a cold with vomiting and was brought to a local hospital in cardiopulmonary arrest after aspirating some pureed food while in the care of a sitter. The infant later died. The case was investigated by the local child protective services even though the majority of the involved physicians saw no reason to suspect child abuse. The final diagnoses were cerebral anoxia and aspiration.

At autopsy there was a bruise on the scalp, retinal hemorrhages and subdural hematomas. Diag-

nosis was death from Shaken Baby Syndrome. The sitter stated she shook the baby after finding the baby unresponsive following a choking episode. No charges were filed. The final manner of death on the amended death certificate was "not determined."

Case 2. This infant was brought by ambulance to a local hospital breathing but unresponsive and with obvious new and old burns, bruises, scratches for which no consistent explanation could be given. Rectal temperature was 90.3°F After life support was withdrawn the infant died. The mother gave permission for the heart valves to be salvaged; therefore, the body had a sutured incision along the chest when presented for autopsy. At autopsy there was a small subdural hematoma. The supplemental cause of death report listed blunt force injury as the cause of death and homicide as the manner of death.

This case was reported to local child protective services at the time of the child's admission. The agency apparently had had an earlier report regarding the child and had not been able to locate the family. There was a public outcry following this child's death. Police investigation determined that the mother's boyfriend had shaken the child. The mother received a seven-year sentence, and the boyfriend a 10-year sentence.

Case 3. This toddler was born with a disease inconsistent with life beyond a few years. Child protective authorities became involved when the parents refused to continue treatment of the disease even though the attending physicians felt treatment could provide useful life. The doctors eventually agreed to withhold extraordinary treatment and the child died at home. No investigation was done and it is not known whether neglect contributed to the child's death. The case was not made a Medical Examiner's case.

Case 4. This infant had been born prematurely and suffered from a lung problem. After several months in hospital, the infant was discharged home on a monitor and with oxygen and other medication. The baby had no fractures on discharge. The family refused high-risk tracking and clinic appointments were not kept. There was a record of an emergency room visit but the parents took the baby away without being seen; one month later, the baby was brought into another emergency room dead.

The autopsy found 30-day-old posterior rib fractures. The certificate of death listed the cause of death as respiratory failure and the manner of death as "natural." After the baby's death, the mother told a professional she was afraid her husband had killed the baby. An investigation was conducted by the police. There is no record that this case was reported to child protective services.

Case 5. This previously well toddler was brought to a local hospital having trouble breathing. The family members who brought him assumed due to his smell that he had swallowed kerosene. The ingestion was not witnessed, according to the family. The child subsequently died. The manner of death was listed as an "accident."

Child protective authorities were not notified until after the child's death. Social services had previously been involved with the family. The family refused autopsy and death was ascribed to kerosene. A life insurance claim was later submitted on the child.

Case 6. This infant was brought to a local emergency room by the parents. The parents stated the infant had rolled off a bed. The infant was cold, non-responsive, and had no respiration or pulse, but was resuscitated, only to subsequently die. During hospitalization retinal hemorrhages and old scars were found. The parents signed permission to harvest the heart, liver, kidneys and lungs, but no recipient could be identified. An autopsy found that the cause of death was a subdural hematoma likely due to violent shaking. It was also noted that the infant was undernourished. Subsequently, the parents were indicted, charged with felonious child abuse and involuntary manslaughter and jailed. The father was released the following year.

Case 7. This toddler was brought into an emergency room unresponsive, and subsequently died after brain death was determined. Autopsy revealed numerous injuries including subdural hemorrhage, a lacerated liver, retinal hemorrhages, old and new abrasions, fractures, bruises of the scalp and toenails, and hemorrhage of the adrenal gland. The death certificate listed closed head injuries as the immediate cause of death and the manner as homicide. The mother's boyfriend was arrested and charged with second degree murder He received a 20-year prison sentence, and was eligible for parole in spring of 1991. The mother did not receive a sentence.

The child had been brought into an emergency room with a fracture and laceration two months prior to its death. At that time a report for suspected abuse was made to the local child protective services agency. The agency refused to accept the report, stating that since the boyfriend was the suspected perpetrator and supposedly did not live in the home, he did not qualify as a caretaker as defined by North Carolina law.

Case 8. This school-age child was brought to a local emergency room after being subjected to forced ingestion as a punishment. The child subsequently died. Autopsy revealed significant external evidence of trauma as well as brain edema. The manner of death was listed as homicide. The child's natural father had previously been convicted of misdemeanor child abuse involving all of his children in 1985 and 1987 in another county. Prior to this child's death the police in the present county of residence had brought warrants against the mother and her boyfriend for misdemeanor child abuse due to evidence of beatings and forced ingestion, but subsequently the charges were dropped.

Case 9. A local hospital admitted this infant with a one-week history of diarrhea and several days of vomiting with profound dehydration. During exploratory surgery the surgeon noted a defect which, he stated, could only have resulted from trauma. The information was conveyed

to the Medical Examiner's office. At autopsy death was ascribed to complications from a possible congenital defect causing small bowel herniation. The manner of death was listed as "not determined."

When this case was reported to the local department of social services, it was learned that the child had previously been reported for neglect. No investigation was conducted by the police and no charges were brought.

Case 10. This infant was born prematurely and remained in a local hospital for several months, ultimately discharged on a complicated regimen because of a lung problem. Before and after discharge, child protective services were provided because of neglect. Dehydration led to subsequent admission. The child missed numerous appointments for follow-up.

Two days prior to the child's death a professional visiting the home noted the child was very ill and in need of medical attention and instructed the mother to take the child to the hospital. The mother did not comply. Two days later police and emergency medical services were called to the home when a caretaker found the infant dead in its crib. They found the body in rigor mortis. The Medical Examiner, called to the home, attributed the cause of death to the lung problem and did not require an autopsy. The manner of death was listed as "natural." Further investigation was not done.

Death Response System and Reporting Laws

This study found that a multiplicity of agencies and persons may become involved in child maltreatment fatalities. These include the Medical Examiner System, county departments of social services, emergency medical and fire fighting services, police, hospital and health care personnel, child protection teams, where available, and the Carolina Organ Procurement Agency. Statistics are compiled by the state Central Registry on Child Abuse and Neglect under the auspices of the Division of Social Services for cases meeting certain definitions, and by county and state vital records departments.

Reporting Laws

North Carolina child abuse reporting laws specify that any person or institution suspecting child abuse or neglect must report (7A-543). Agencies such as emergency medical teams or the Medical Examiner office are not named specifically in the reporting requirement, but they are included in the General Statute and, therefore, have a duty to report. There is no mandate to report the death of a child to a department of social services. Failure to report is a misdemeanor, but carries no specific penalty.

North Carolina also has a statute (90-21.20) requiring physicians in hospitals to report to police authorities, all wounds, infections, and illnesses that may involve criminal acts. Statute 130A-383 requires notification of the Medical Examiner upon any sudden, unexpected or suspicious death and states that the body shall not be disturbed without authorization.

Department of Social Services

Each North Carolina county operates child protective services through their county department of social services. Local agencies' responses to reports and their interpretations of statutes may vary. The state agency establishes policy, guidelines, and recommendations, but has little real authority over the 100 local agencies.

Emergency Medical Services

As a first responder, emergency medical services may make screening assessments in unexpected child deaths and reports to the proper authorities. Local differences account for a wide variation in training on abuse and neglect issues.

Medical Care System

The level of knowledge regarding medical indicators of abuse and neglect varies widely among individual health care providers and hospitals. Many emergency rooms have no protocol for handling patients who arrive dead or near death. Some medical providers may not understand abuse and neglect or law enforcement reporting requirements. In this study some providers erroneously assumed other professionals or agencies were reporting or sharing information necessary for adequate investigations and protection.

Medical Examiner System

North Carolina has a strong Medical Examiner system that requires investigations and certification of all deaths that are unattended, suspicious, or the result of violence, including accidents and sudden infant death syndrome (SIDS).

Medical Examiners may authorize autopsies if they deem it advisable or in the public interest; however, they may authorize disposal of the body without autopsy if they feel there is a cause of death sufficient to explain the sudden unexpected occurrence. There is no specific protocol for autopsy and investigation procedure in the cases where abuse or neglect is suspected .[7]

Organ Donor Requirements

Although organ donation cannot proceed if the case is under the jurisdiction of the Medical Examiner until he or she grants permission, family members may be asked to grant permission for their child to be an organ donor as required by recent legislation for certain hospitals. These family members may also be the perpetrators of the fatal abuse, creating a situation in which evidence of crime may possibly be compromised. The organ donor issue raises difficult ethical questions beyond the scope of this study.

Vital Records

The state of North Carolina gathers data on resident deaths statewide and classifies these data according to the cause of death

and the age, race and sex of decedents using the International Classification of Diseases, Ninth Edition (ICD-9). Coding follows procedures set by the National Center for Health Statistics.

The classification "child battering," ICD-9 E967, occurs as a category of homicide. For a death to be coded as child battering, more than one episode of abusive injury must be indicated on the death certificate or the certifier must specify abuse.[8,9] One of the four homicides in this study met coding requirements for child battering.

In 1988, for the entire state only one death of an infant and two deaths in the age range one to four years were coded as due to child battering. The total number of homicides of children under age 10 was 23.[10] Epidemiological studies suggest it is likely the majority of these 23 homicides were from fatal child abuse.[11,12] The cases in this study demonstrate that some abuse fatalities do not get coded as child battering since the death certificate may not contain the required information.

Central Registry on Child Abuse and Neglect

North Carolina General Statute 7A-552 requires that the Department of Human Resources maintain a Central Registry of abuse and neglect cases. The reporting and data collection procedures were not designed to collect accurate statistics on child abuse fatalities. Maltreatment fatalities not in the purview of child protective services are not reported to the Registry. Non-reportable cases include children who die from fatal abuse at the hands of parents or caretakers and who have no siblings, as well as child deaths in which the perpetrator does not fit the "caretaker" definition. If child protective services refuses to investigate a case, no report is made to the Central Registry. (In 1988 only substantiated cases were sent to the Central Registry).

Deaths are reported to the Central Registry only if the death occurs prior to the investigative case decision. A death for any reason, abuse related or not, would be reported during this period. If a death occurs after a case decision is made a new report is not made; thus, deaths of children under past or current child protective services where a determination has already been made are not reported. It should be understood that the Registry was not intended as a tracking tool and there is no way to update information.

Comment

I found numerous inconsistencies in child fatality response systems. Inaccuracies in statistical recording of child abuse fatalities arose from definitional problems as well as from problematic coding and recording criteria. The findings in this study make it clear that accurate statistics on child abuse fatalities are totally lacking. The fact that six of seven autopsied cases had evidence of prior abuse or neglect tells us an opportunity may have existed for intervention that might have prevented a child's death.

Child protective service agencies varied in their involvement in cases where perpetrators included the mothers' boyfriends (cases 2, 7, and 8). That counties may interpret child abuse statutes differently points out a weakness of North Carolina's county-based system. Police investigators expressed frustration with the lack of medical expertise and the lack of cooperation from local child protective service agencies, where confidentiality requirements may hamper the gathering of information.

The development of a statewide multidisciplinary child fatality review board would enhance the state's ability to prevent future child abuse fatalities. Two basic functions would be served by such review. First, circumstances surrounding the fatal event could be explored to allow for a better understanding and more accurate designation of its cause. Secondly, the information could be used to improve system responses with a goal of helping prevent future deaths of children in similar circumstances.[13] Thirty-two states have such boards functioning at either the state or county level.[14] States with child fatality review committees report that reviews have led to policy changes they hope will help prevent future deaths.

The confusion in response systems identified in this study keeps invisible the fact that violence toward children is a leading cause of child deaths in our state and nation. Methods to prevent fatal child abuse will remain inadequate as long as they are based on narrowly drawn epidemiological patterns and inaccurate statistics. Child abuse and neglect fatalities are a community problem; they need multi-agency, community involvement for prevention. Child protective services cannot operate in a vacuum and may not have legal authority in some cases.

North Carolina has an opportunity to address these issues. In July, 1991, the North Carolina Legislature passed a comprehensive bill, The North Carolina Child Fatality Prevention Act of 1991,[15] that seeks to remedy some of these problems. The two bodies mandated by this bill, the North Carolina Child Fatality Review Team and the North Carolina Child Fatality Task Force, will have a unique opportunity to address the system response to children in need. ❑

Acknowledgments

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The recommendations of the study do not necessarily represent the official position of all the Advisory Committee.

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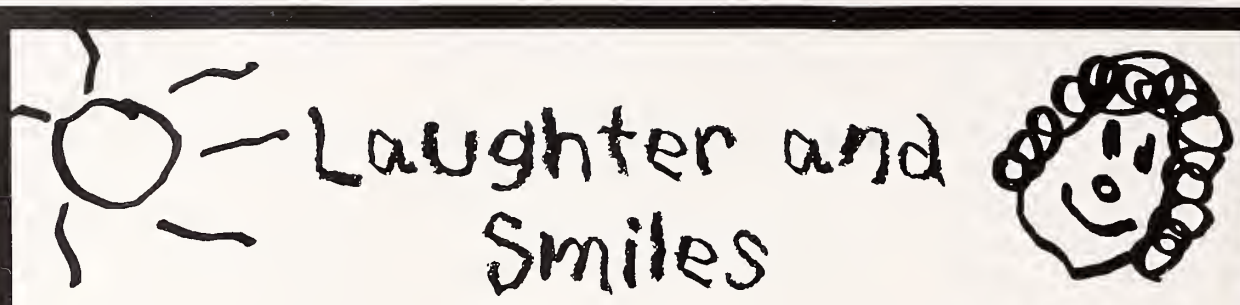
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Critical Incident Stress Debriefing for Emergency Service Personnel in North Carolina

Jackie Waters and William Jaffurs, M.D., FACEP

Critical Incident Stress Debriefing (CISD) is a group process designed to accelerate normal recovery in emergency service personnel who have had an emotionally traumatic experience on the job.[1] Such experiences result from confronting such situations as death or injury to a child, death of a co-worker in the line of duty, suicide, multi-casualty incidents, particularly bizarre or mutilating trauma, or an incident associated with negative or critical media coverage.

CISD has been available in North Carolina since January, 1988. Seven regional teams currently offer CISD services (see table 1). Participants may include EMS/rescue, fire, law enforcement, dispatch, and hospital personnel—collectively referred to as emergency services (ES) personnel.

Emergency service personnel routinely encounter danger, destruction, and human anguish. Some incidents are extreme. Incident-related stress has short- and long-term effects. Impairment of personal and professional function may be immediate. ES personnel commonly employ defense mechanisms involving denial, sublimation or transference in order to minimize the personal impact of overwhelming events. They "tough it out" or feel they should not let it get to them. But this approach is not effective. Higher than average rates of attrition and sick time off have been attributed to stressful conditions in the emergency service workplace.[2] Unresolved conflicts accumulate over time and may result in substance abuse, somatic illness or disruption of interpersonal relationships.[3] CISD not only helps the ES professional mitigate the effects of acute stress, but sensitizes administrative personnel of ES organizations to this problem.

CISD in Eastern North Carolina came into being in 1987 as a result of a project developed by the Region O EMS Advisory Council supported by the NC Office of Emergency Medical Services Regional Grant Fund Program. Responding to requests from ES professionals seeking services, our EMS project director attended the 1987 International CISD conference in Baltimore. Soon thereafter, a planning committee was formed including representatives from the Southeastern Mental Health Center, the Department of Psychology at UNC-Wilmington, the Cape Fear Council of Governments, local fire fighters, law enforcement, emergency medical services, rescue services, and local hospitals. Costs for training and developing the CISD team were less that $3,000. Our EMS project director has also served as a resource for the development of other CISD programs across the state.

Table 1. North Carolina Critical Incident Stress Debriefing Teams as of December 1990

- Regions A,B,C,D combined to form the Western NC debriefing team.
- Region E: Alexander, Burke, Caldwell, and Catawba Counties.
- Region G: Alamance, Caswell, Davidson, Guilford, Randolph, and Rockingham Counties.
- Region I: Davie, Forsyth, Stokes, Surry, and Yadkin Counties.
- Region J: Chatham, Durham, Johnston, Lee, Orange, and Wake Counties.
- Region L: Edgecombe, Halifax, Nash, Northampton, and Wilson Counties.
- Region O: Brunswick, Columbus, New Hanover, and Pender Counties.

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The original debriefing training session was conducted in Wilmington by consultant Jeff Mitchell, Ph.D., in October, 1987. The freshly trained CISD team soon conducted the first debriefing involving 17 fire fighters, EMTs and law enforcement personnel who had responded to an industrial structure fire that resulted in two deaths. Since that time 33 debriefings have been conducted in Region O.

Case 1

A 30-year-old female carrying a 30-week pregnancy was in a motor vehicle accident. Her automobile was found wrapped around a tree, and extrication took one hour. During this time she repeatedly exclaimed, "Help me, I'm dying." Despite aggressive resuscitation, both mother and child eventually succumbed in the hospital a short time after admission.

A stress debriefing took place the same day. Early denial and feelings of helplessness and frustration were expressed. Anger was expressed about the apparent failure of the EMS system: "Why didn't it work?" Discussion focused on the care delivered, confirming the appropriateness of the response time, extrication time, and medical interventions. Resolution was based on the shared feeling that everything possible under the circumstances had been done to save the victims. Individual follow-up counseling was not deemed necessary for any of the eight EMTs or the one RN involved.

Case 2

A house fire resulted in the death of an 11-month-old infant and severe burns to two other young children. The incident received extensive press coverage favorable to several neighborhood heroes who helped rescue the children, though little mention was made of the EMS personnel involved.

A stress debriefing occurred three days later. Participants included four EMTs, one social worker, five fire fighters, and five emergency department personnel. Feelings of anger were expressed towards the mother for leaving the children unattended. One EMT was experiencing intrusive daydreams, nightmares, and insomnia. Another EMT described repeated flashbacks to the episode. Participants claimed feelings of frustration and irritability from dealing with the case and aftermath. The discussion lasted two hours. Individual follow-up was arranged for two of the participants. All participants are still in service after two years.

Methods

The CISD team and debriefing process are based on a crisis intervention model developed by Jeff Mitchell, Ph.D.[1,3] Debriefers participate in a 16-hour initial training workshop. The CISD team should include at least one mental health worker and one peer for each professional group involved in the debriefing session. An actual scenario may involve one to two mental health professionals and one to three peer debriefers for one to 15 participants. Requests for debriefing prompt the debriefing session usually within 72 hours of the incident.

The peer member serves the important function of saying "Hey, I've been there too, and you will make it through this." The peer lends credibility to the CISD session which might otherwise seem an institutional requirement to individuals who are not accustomed to discussing their feelings in either formal or informal surroundings. The peer might also elicit a history or symptoms by citing personal experience. This individual should be one who can empathize with co-workers. This is the team member who should discuss and emphasize the confidentiality of the CISD sessions.

The CISD session is a dynamic seven-phase process intended to promote information gathering, problem identification, and resolution. A facilitator, usually one of the mental health workers, should direct the session through the different phases insuring that the goals of each phase are accomplished.

1. The **Introductory Phase** helps to set ground rules and introduce participants and team members. Name tags and an informal atmosphere are desirable. Smoking may even be allowed by group consensus. Taboo are news media, notes, tape recorders, extraneous personnel, and interruptions. Criticism of technical or operational aspects of the case should be avoided. Individuals should be encouraged to speak for themselves. The facilitator should introduce the purpose of the session as well as briefly discuss the phases of the process. Confidentiality should be emphasized.

2. A **Fact Finding Phase** provides participants an opportunity to describe their individual versions of the incident. The facilitator keeps the discussion on factual events and perceptions and facilitates moving along from one participant to the next. Peers may be supportive and encourage verbalization by asking open-ended questions.

3. The facilitator then begins the **Thought Phase** by asking the participants to describe their first thought during the incident. This discussion should focus on the individual perceptions of the participants.

4. Next the discussion moves to a **Reaction Phase** in wihch participants describe feelings they associate with the event and aftermath. Peers may facilitate this difficult process by expressing their own reactions to similar experiences. The facilitator should summarize feelings periodically and note individuals requiring follow-up.

5. Next the facilitator focuses on a **Symptoms Phase**. Typical symptoms and signs of incident-related stress include dizziness, nightmares, flashbacks, irritability, substance abuse, absenteeism, difficulty concentrating, actual somatic illness or migraine. Disruption of home and work life may occur.

6. General features of acute situational anxiety and exogenous depression are common. The **Teaching Phase** enables the facilitator to verify that the described symptoms and emotions are natural reactions to a stressful incident. Suggestions that the facilitator makes for working through the stress reaction may

include advice on such matters as nutrition and exercise. Phone numbers and contact persons are established for ongoing counseling and access to other appropriate community resources.

7. Finally, the **Re-entry Phase** serves to wrap up loose ends, answer questions and summarize the proceedings. The facilitator may single out certain individuals who require individual follow-up or urgent intervention. Team members should remain for a critique after the group adjourns. During this time they may exchange observations, make further follow-up plans, and consider improvements for future sessions.

Results and Discussion

CISD meets an urgent need among emergency service personnel in our region, as evidenced by the 33 sessions called during the past two years. In an era of funding cutbacks and budget shortfalls, this technique for stress management provides a forum for honorable and confidential expression of the sometimes painful experiences endured by emergency service personnel, who are often underpaid, under-equipped and unrecognized. That CISD is helpful has been confirmed by one large Australian study of CISD participants within one year of their initial debriefing.[4] Seventy-five percent of participants cited three main values of a CISD: (1) The opportunity to express oneself and be assured that one's reactions are normal; (2) the chance to learn from others and mobilize coping behaviors; and (3) the ability to gain a greater understanding of critical incident stress. Another outcome study emphasized that debriefing within three weeks of the incident reduced disability and treatment costs for subsequent stress-related disorders.[5]

Resources for establishing local CISD programs are now available from within North Carolina (see table 1). Furthermore, the American Critical Incident Stress Foundation* functions as a clearing house for information on CISD, including academic meetings and training programs. This organization currently lists 125 CISD teams in 34 states and recognizes similar activities in other nations including Canada, Germany, Australia and New Zealand.

Formation of a local or regional CISD team in justified in an area that has an average of six major events per year. A local task force including mental health and emergency service personnel helps to get things started. Written guidelines for training, implementation, and review should then be developed. Initially the program must be promoted to target agencies, but once visible, the program is utilized frequently. CISD appears to be a method in demand for ameliorating the effects of stress on emergency service professionals. Long-term experience with CISD may prove to limit absenteeism, attrition and other effects of stress-related dysfunction. ❑

*P.O. Box 204, Ellicot City, MD 21043, Telephone 301/750-0856.

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Hats Off to the Recovering Docs

Robert C. Vanderberry, M.D.

"There is no limit to what can be accomplished when no one cares who gets the credit." —Anonymous

In recent months many plaudits have been cast in the direction of the North Carolina Physicians Health and Effectiveness Program (NCPHEP).

At a recent meeting of the Georgia Medical Association, G. Douglas Talbott, M.D., the guru of treating impaired physicians, stated that the Georgia program should be patterned after that in North Carolina.

Nicholas Stratas, M.D., of Raleigh, recently attended the Annual Meeting of the American Psychiatric Association in New Orleans where his colleagues from other states told him they had heard the North Carolina Impaired Physicians Program was among the best in the nation.

During the period June 1-8, the Federation of State Physician Health Programs met in Toronto in conjunction with the American Medical Association's conference on impaired physicians. On several occasions the North Carolina program was praised in quite flattering language.

All of this recognition was very pleasing to the NCPHEP staff, and we naturally wanted to take credit for our efforts. However, on closer reflection, we all realized that we were the benefactors of good fortune and good planning. Those individuals from the North Carolina Medical Society and the North Carolina Board of Medical Examiners who conceived the notion of an impaired physicians program, sought appropriate legislation, and established concrete guidelines for the running of the program displayed a great deal of wisdom. Other states are surprised by the efficiency and the effectiveness of a program that is jointly run by the Medical Society and the Board of Medical Examiners. When members of the North Carolina Hospital Association were selected for the NCPHEP Board of Directors in 1990, the effort to help impaired physicians in North Carolina was more greatly enhanced. Therefore, let us give credit to those individuals who planned NCPHEP as well as to those who direct, fund and operate this effort on a day-to-day basis.

Also, let us realize that no effort to help the impaired physicians in North Carolina will be successful unless the impaired physicians themselves have a successful outcome. Those with chemical dependency problems seem to have the most difficult time getting into recovery but they also seem to have the best outcome. Physicians have a major wall of denial which must be cracked. It is truly difficult for anyone to admit that his or her own best efforts have led to financial destruction, family disruption and alienation from one's peers. Likewise, the possession of a medical degree and medical license gives the physician the impression that current problems are situational and will magically go away. If the physician's wall of denial is penetrated, and if he or she gets into appropriate recovery, the physician can have a recovery rate as high as 90%, compared to a recovery rate in the general population of 40% to 42%. There is no doubt that the fear of losing one's medical license is impetus enough for a physician to do whatever is required.

As of mid-April, 1991, NCPHEP crossed the 200 mark for physicians enrolled in the program. These men and women have been a remarkable group with which to work. Some of these physicians have completed their treatment plan contracts with NCPHEP and are now serving as monitors for other recovering physicians.

The breakdown of cases by diagnosis and by medical specialty as of the second quarter of 1991 are reflected in tables 1 and 2. Alcohol still ranks as the most common impairment threat to physicians and to their medical practices. Perhaps the biggest surprise in the first two and a half years of NCPHEP's operation has been the number of physicians addicted to opioids and analgesics. Normally the alcohol-to-opioid ratio for physicians would be expected to be 7 to 1, but far more opiate addicts are noted in the North Carolina series. Perhaps these physicians are more impaired than physicians addicted to other substances and they have "bottomed out" earlier. In time, this number may stabilize and become less of a problem as the years progress. The 10% incidence of psychiatric disor-

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Table 1. Breakdown by Diagnosis (NCPHEP Statistics as of 6/14/91)

	#	% of total
Alcohol	78	36.9
Amphetamines*	0	0.0
Barbiturates	3	1.4
Benzodiazepines	1	.4
Cocaine	4	1.9
Dual Diagnosis	21	9.9
Marijuana	2	.9
Opioids/Analgesics	28	13.2
Polydrug	26	12.3
Psychiatric Disorder	21	9.9
Sedative/Hypnotics*	0	0.0
Sexual Addiction	5	2.3
Other	12	5.6
Unsubstantiated	10	4.7
Total:	211	99.4

* Addiction to these drugs has been seen in the Polydrug category.

Table 2. Breakdown By Specialty (NCPHEP Statistics as of 6/14/91)

	# in NCPHEP (N=211)	% in NCPHEP	# in State (N=12,145)	% in State
Anesthesia	12	5.6	514	4.2
Emergency Medicine*	18	8.5	471	3.9
ENT	3	1.4	215	1.8
Family Medicine	27	12.8	1561	12.8
General Practice*	19	9.0	316	2.6
Internal Medicine	17	8.0	1532	12.6
Neurology	4	1.9	199	1.6
Neurosurgery	1	0.4	110	0.9
Nuclear Medicine*	2	0.9	13	0.1
Obstetrics/Gyn	19	9.0	718	5.9
Occupational Medicine	2	0.9	73	0.6
Ophthalmology	2	0.9	362	2.9
Orthopaedics	7	3.3	439	3.6
Pathology	1	0.4	364	2.9
Pediatrics	13	6.1	884	7.2
Plastic Surgery	2	0.9	98	0.8
Psychiatry*	27	12.7	845	6.9
Radiation Therapy*	1	0.4	17	0.1
Radiology	2	0.9	628	5.1
Residents	12	5.7	1624	13.3
Surgery	15	7.1	830	6.8
Urology	5	2.3	255	2.0
Others	0	0.0	77	0.6
Totals:	211	99.1	12,145	99.2

* Denotes overrepresentation by that specialty.

ders is not a surprise. Physicians are not immune to emotional problems, either as medical students or as medical practitioners, but they are very loathe to seek help for fear of being labeled. As noted in my previous article in the *Journal* (July 1990;51:347-9), over 50% of physicians with chemical dependency problems and psychiatric problems are primary care providers. However, three groups of physicians are well overrepresented for their specialty (table 2). Three times the number of General Practitioners are represented in the NCPHEP statistics than would be expected given their statewide representation. More General Practitioners than not are in stressful solo practice settings and have little time to depressurize. Emergency Medicine physicians are represented at a rate twice what might be expected. Many Emergency Medicine physicians find themselves in a life-style that has very little balance. Working 12- to 24-hour shifts with little sleep and then doubling back for another shift with little rest is often the norm rather than the exception. Even though these physicians have a number of days off after a run of on-call days, many also lack self-affirming activities such as hobbies or exercise. One Emergency Medicine physician described his life-style as "all or none." He stated that working in an emergency room gave him an adrenaline rush and when he was off he needed to come down off that high. He then turned to drugs or alcohol to calm down and gain necessary sleep. The third group of physicians that is quite worrisome is the Psychiatrists. Their numbers in the NCPHEP series is nearly twice what might be expected from their statewide representation. Dealing with the emotional problems of others on a daily basis must exact a heavy toll on these practitioners. Although the number of Nuclear Medicine and Radiation therapy physicians in the state is quite small, their overrepresentation should also be duly noted.

As can be seen in table 3, white male physicians predominate in the NCPHEP caseload statistics. When one notes that the average age is in the mid-40s for all diagnostic categories, it is not surprising that white males lead each list. Most of these physicians graduated from medical school 20 to 25 years ago when white males comprised the bulk of those selected for medical school training. With more and more female and minority students now being selected for medical training across the country, impairment statistics will likely show a demographic change in the future.

Many physicians and other members of our society feel that alcoholics and addicts have weak wills, are degenerates, and do not deserve another chance. Our statistics reflected in table 4 show that these physicians are recovering and are becoming productive members of society again. In fact, after receiving appropriate treatment, the great majority of physicians are able to return to their practices without difficulty. Four chemically dependent physicians lost their licenses because of recurrent relapses of their diseases. Nine chemically dependent physicians who had previously lost their licenses regained them after going into appropriate treatment. It might be ex-

Table 3
Demographic Data (NCPHEP Statistics as of 6/14/91)

Diagnosis	Total	White Male	White Female	Black Male	Black Female	Average Age (Range 29-72)
Chemical Dependency	142	130	6	5	1	46.5
Dual Diagnosis[1]	21	19	2	0	0	45.2
Psychiatric	21	14	6	1	0	43.8
Sexual Addiction	5	5	0	0	0	47.8
Unsubstantiated[2]	10	10	0	0	0	46.3
Other[3]	12	11	1	0	0	54.8
Totals:	211	189	15	6	1	

[1] Indicates chemical dependency plus a psychiatric problem
[2] Physicians falsely accused, insufficient information for further action
[3] Physicians with aging problems, physical disabilities, inappropriate referral

pected that those physicians with both a psychiatric diagnosis and chemical dependency would be more prone to relapse, but that has not been true in our series. All of these physicians are now actively practicing. It is not surprising that many of them have had far fewer psychiatric difficulties since becoming clean and sober. The most difficult group of physicians to help have been those with pure psychiatric diagnoses. Some have challenged the diagnosis of their treating psychiatrist, some have manipulated their own medications, and some have dropped out of psychiatric care. It is most unfortunate that five of these physicians have lost their medical licenses trying to treat themselves.

In the category of sexual addiction, the biggest surprise is that there are only five cases to date. There is no doubt that many sexual problems existed among the chemically dependent physicians, but those diagnosed as pure sex addicts have been few. All of these physicians are in individual counseling, attend Sex Addicts Anonymous meetings and are being rehabilitated. Only one of these physicians has made insufficient progress to resume his medical practice. It is gratifying to note that some physicians' reputations have been saved after having been falsely accused of chemical dependency problems, sexual impropriety, etc. Of our 211 cases, 50 have been self-referrals, indicating that physicians are beginning to trust NCPHEP and that our staff is not on a "witch hunt."

Further evidence is noted in table 5 that physicians are not only recovering, they are also practicing good medicine. Only one malpractice suit has been filed against a participant in NCPHEP. Whether actively impaired or not, it would be logical to assume that a physician's cognitive, technical and clinical skills would be affected. This has not been the case with NCPHEP's participants. Medical Mutual Insurance Company of North Carolina has insured 10,455 doctors over the past three years (an average of 3,481 per year), and 1,036 pending suits are now being processed. Extrapolating from this information, it would be probable that 19 pending lawsuits would have been filed against NCPHEP participants, rather than only one. Surely this is a matter of good fortune for these physicians, but their track record is very impressive nevertheless.

Also reflected in table 5 is the recovery rate of physicians enrolled in NCPHEP. Those with a pure chemical dependency problem have had a recovery rate of 87.4%, and those with a dual diagnosis have recovered at a rate of 90.5%. This is in keeping with the na-

Table 4
Participant Practice Status (NCPHEP Statistics as of 6/14/91)

Category	Deceased	Maintained Practice	Retired	Lost License	Regained License	Seeking License	Total
Chemical Dependency	1	121	5	4	9	2	142
Dual Diagnosis	0	21	0	0	0	0	21
Psychiatric	0	14	0	5	1	1	21
Sexual Addiction	0	2	0	1	2	0	5
Unsubstantiated	0	10	0	0	0	0	10
Other	0	5	2	0	1	4	12
Totals:	1	173	7	10	13	7	211

Table 5. Physician productivity and Recovery Rate
(NCPHEP Statistics as of 6/14/91)

Category	Total	Relapses	Recovery Rate %	Malpractice Suits Since Enrollment
Chemical Dependency	142	18	87.4	1
Dual Diagnosis	21	2	90.5	0
Psychiatric	21	NA	NA	0
Sexual Addiction	5	0	100	0
Unsubstantiated	10	NA	NA	0
Others	12	NA	NA	0

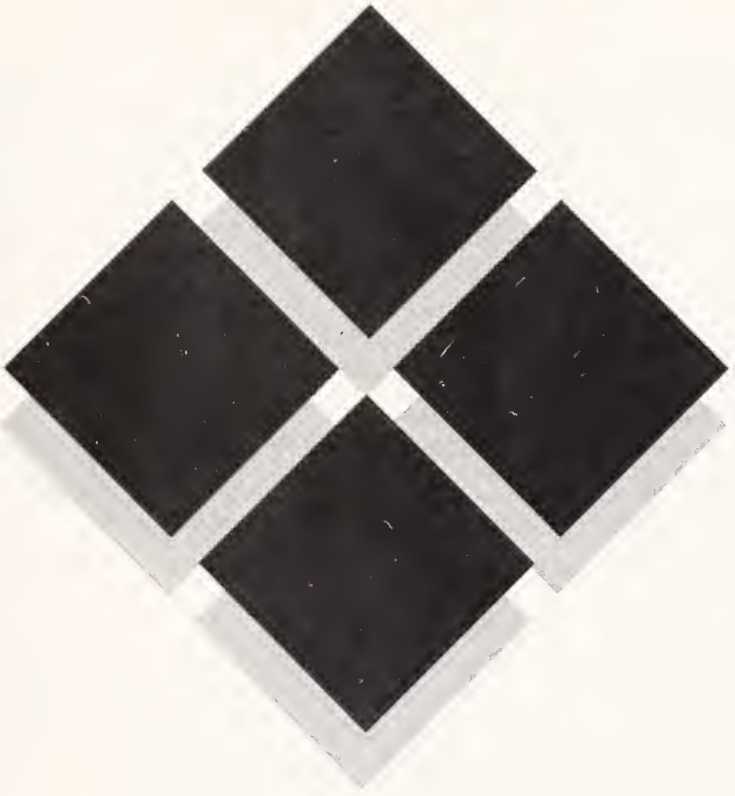
tional data that are now being compiled by the Federation of State Physician Health Programs.

There is no doubt that the recovery rates cited above have been influenced by the stringent aftercare plans utilized by NCPHEP. Each participant must sign a treatment plan contract after receiving his or her initial treatment. Chemically dependent physicians must attend Alcoholics Anonymous (AA) or Narcotics Anonymous (NA) a minimum of three times weekly. Many are fortunate to attend Caduceus meetings, professional support groups patterned after AA, in North Carolina's larger cities. Each participant is assigned a physician in the appropriate geographic area to serve as his or her NCPHEP monitor. These monitors generally meet twice monthly with the participant on a random basis to obtain urine drug screens, saliva alcohol tests, etc., and to inquire how the participant is doing socially and professionally and whether he or she is attending the required AA or NA meetings and obtaining appropriate Continuing Medical Education credits. NCPHEP monitors serve on a completely voluntary basis and are critical to the participants' recovery. Those physicians with a psychiatric problem are seen at least monthly by their therapists. The therapist serves as a monitor and reports the general progress of the participant without revealing specifics of the participant's therapy. All participants have a quarterly evaluation filed by their monitors with the NCPHEP office. In addition to the above aftercare plans, NCPHEP staff members meet with participants quite frequently to assess their overall progress. Each staff member travels an average of 2,500 miles monthly in seeing these recovering physicians throughout the state.

Despite the recovery rates, one might question whether all of these efforts to help impaired physicians are worthwhile or necessary. Experience to date has shown that the answer is an emphatic yes. Many physicians have already been helped, but there are many more needing assistance, if the Federation of State Physician Health Programs' statistics are correct. This organization places the impairment incidence for physicians at 10%.

It is not the time to rest on our laurels; it is imperative that we identify those colleagues who need help before it is too late. Let us praise the courageous men and women who have been rescued from their addictions and from various other forms of impairment. Each of them will personally affect the lives of several thousand more patients in their respective careers. They in turn are expressing their gratitude by returning to the art of healing and by sharing their recovery with others. This effort is a human chain letter that really works. Thanks to all in North Carolina who have made this project possible. ❑

The North Carolina Physicians Health and Effectiveness Program is run by the North Carolina Medical Society Foundation. Its governing Board of Directors has members from the North Carolina Medical Society (NCMS), the North Carolina Board of Medical Examiners (NCBME) and the North Carolina Hospital Association (NCHA). The major source of funding is from the NCBME via a designated portion of the biennial medical licensure fee. Other significant funding sources are from NCHA member hospitals and hospital medical staffs, the NCMS, donations from NCMS members to the Medical Society Foundation, Medical Mutual Insurance Company of North Carolina and from Britthaven Nursing Homes. Scholarships for treatment of indigent physicians comes from contributions from the NCPHEP participants themselves.



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Letters to the Editor

In appreciation of the special issue on women's health (October, 1991)

To the Editor:

Dr. Margaret Bertrand has done an outstanding job as guest editor of the special issue of the NCMJ on Women's Health. The task of trying to choose those articles which by alerting physicians about special problems of women could do the most good was monumental. I commend her for her careful attention to the pathology of the breast and to reproductive issues. Years ago I was counseling a group of teenage girls about sex. I was shocked to hear that most of them had little notion of the function of the female breast. Maybe sometime in the future the NCMJ could persuade someone to write about breast feeding.

Bailey Webb, M.D.,
2616 Erwin Rd., Apt. D-2
Durham 27705

To the Editor:

I wish to commend you, the Journal and Dr. Margaret Bertrand, guest editor, on the Special Issue on Women's Health. I am certain that this issue required considerable planning and selection of individual topics. In Dr. Bertrand's opening comments ("Health Concerns of Female Patients: Politics or Apathy?" pp. 477-8), she pointed out that these and many other issues of women's health are on the forefront of medical consciousness and research. I am pleased to see that North Carolina physicians, through this journal, are supportive of these issues and are contributing to the recognition of and emphasis on both preventive health and management of difficult disease processes in women.

I applaud each of the authors of the individual articles, as "cutting edge" information was provided in each. I look at this as a start and hope that the editors of NCMJ will continue to solicit and publish articles concerning women's health in the future.

Thank you again, Drs. Stead, Halperin and Bertrand, for this excellent issue.

Nancy Bates Allen, M.D.
Assistant Professor of Medicine,
Rheumatology and Immunology
Duke University Medical Center
Durham 27710

To Dr. Bertrand:

Your comments as guest editor of the October, 1991, NCMJ were excellent. Congratulations on being chosen as guest editor—a good choice. As a former Ob-Gyn specialist I have been guilty of less than diligent attention to the special medical requirements of women particularly outside our specialty. This is all a bit late now that I am retired. It should help other mere male doctors unless possessed of unacknowledged chauvinism.

Donald C. Schweizer, M.D., FACOG
1009 Bay Head Circle
Wilmington 28405

To Dr. Bertrand:

Congratulations upon your October 1991, NCMJ guest editor role. Women's health is a timely subject and it was very well done in the "Special Issue" under your direction.

You are highly regarded and much appreciated by the American Cancer Society. Women's health will continue to be a high priority.

Thanks for all you do.

Roger O'Quinn
American Cancer Society
Raleigh

To Dr. Bertrand:

We are so proud of you—not only this latest accomplishment, but for the many things you are doing in the community.

Way back—we knew a winner when we saw one.

Carroline and Maury LeBauer
Greensboro

Quoting Dr. Stead

To Dr. Stead:

It's 7:30 on Sunday morning and I just got a call from the nursing home, and it reminded me of something that I've always credited to you that has really helped make my life much better.

"I'd much rather be called to see a patient who is frightened rather than one who is dying. The results of my treatment are so much better!"

Thank you for having said that. I'm glad it was transmitted to me, even if I don't remember just how or where or from whom!

John Dykers, Jr., M.D.
P.O. Box 565
Siler City 27344

Response from the Editorial Office:

Those who are interested can find that bit of Stead wisdom and much more in E.A. Stead, Jr., "What This Patient Needs Is a Doctor," published by Carolina Academic Press, Durham, NC.

Aphorisms of the Month

Edited by Daniel Sexton, M.D.

Surgeons, Physicians and Lawyers

A fashionable surgeon, like a pelican, can be recognized by the size of his bill.

J.C. Da Costa, *The Trials and Triumphs of the Surgeon*

A surgeon should be young, a physician old.

Italian proverb

Doctors are just the same as lawyers; the only difference is that lawyers merely rob you whereas doctors rob you and kill you too.

Anton Chekhov, *Ivanov*, 1887

A man may as well open an oyster without a knife as a lawyer's mouth without a fee.

Barten Holyday

The physician and the surgeon belong to entirely different schools of medical thought. The good physician is a disciple of Paracelsus who was a skeptic, while the good surgeon is a disciple of Galen, who was a good dogmatist.

Charles Brook, *The Battling Surgeon*

The following aphorisms have been contributed by E. Arthur Bolz, M.D., Randolph Road Ear, Nose & Throat Associates, P.A., 3535 Randolph Rd., Suite. 210, Charlotte 28211.

I have learned silence from the talkative, tolerance from the intolerant, and kindness from the unkind.

Kalhil Gibran

You've got to do your own growing, no matter how tall your grandfather was.

Irish proverb

Shrouds have no pockets.

Yiddish proverb

Health nuts are going to feel stupid some day, lying in the hospital dying of nothing.

Redd Foxx

Nobody roots for Goliath.

Wilt Chamberlin

I don't like money, actually, but it quiets my nerves.

Joe Louis



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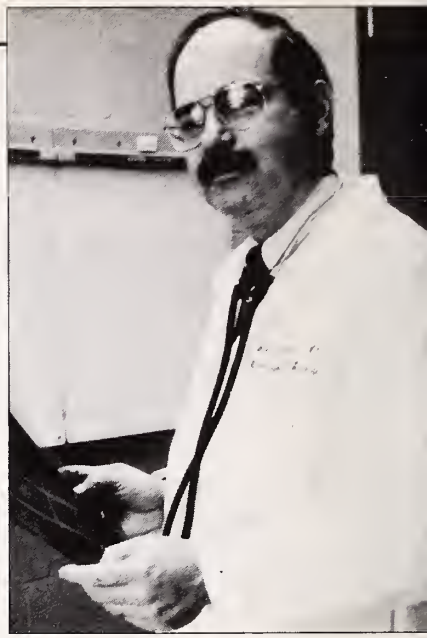
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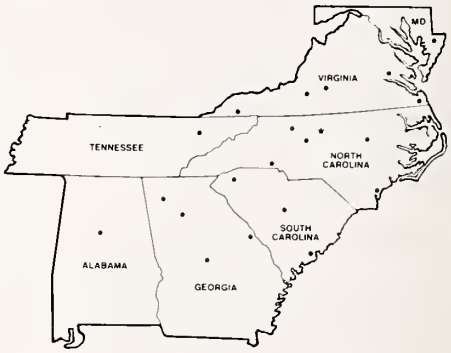
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BRIEF SUMMARY

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Warnings: Verapamil should be avoided in patients with severe LV dysfunction (eg, ejection fraction < 30%) or moderate to severe symptoms of cardiac failure and in patients with any degree of ventricular dysfunction if they are receiving a beta-blocker. Control milder heart failure with optimum digitalization and/or diuretics before Calan SR is used. Verapamil may occasionally produce hypotension. Elevations of liver enzymes have been reported. Several cases have been demonstrated to be produced by verapamil. Periodic monitoring of liver function in patients on verapamil is prudent. Some patients with paroxysmal and/or chronic atrial flutter/fibrillation and an accessory AV pathway (eg, WPW or LGL syndromes) have developed an increased antegrade conduction across the accessory pathway bypassing the AV node, producing a very rapid ventricular response or ventricular fibrillation after receiving I.V. verapamil (or digitalis). Because of this risk, oral verapamil is contraindicated in such patients. AV block may occur (2nd- and 3rd-degree, 0.8%). Development of marked 1st-degree block or progression to 2nd- or 3rd-degree block requires reduction in dosage or, rarely, discontinuation and institution of appropriate therapy. Sinus bradycardia, 2nd-degree AV block, sinus arrest, pulmonary edema and/or severe hypotension were seen in some critically ill patients with hypertrophic cardiomyopathy who were treated with verapamil.

Precautions: Verapamil should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of overdosage. Verapamil may decrease neuromuscular transmission in patients with Duchenne's muscular dystrophy and may prolong recovery from the neuromuscular blocking agent vecuronium. It may be necessary to decrease verapamil dosage in patients with attenuated neuromuscular transmission. Combined therapy with beta-adrenergic blockers and verapamil may result in additive negative effects on heart rate, atrioventricular conduction and/or cardiac contractility; there have been reports of excessive bradycardia and AV block, including complete heart block. The risks of such combined therapy may outweigh the benefits. The combination should be used only with caution and close monitoring. Decreased metoprolol and propranolol clearance may occur when either drug is administered concomitantly with verapamil. A variable effect has been seen with combined use of atenolol. Chronic verapamil treatment can increase serum digoxin levels by 50% to 75% during the first week of therapy, which can result in digitalis toxicity. In patients with hepatic cirrhosis, verapamil may reduce total body clearance and extrarenal clearance of digitoxin. The digoxin dose should be reduced when verapamil is given, and the patient carefully monitored. Verapamil will usually have an additive effect in patients receiving blood-pressure-lowering agents. Disopyramide should not be given within 48 hours before or 24 hours after verapamil administration. Concomitant use of flecainide and verapamil may have additive effects on myocardial contractility, AV conduction, and repolarization. Combined verapamil and quinidine therapy in patients with hypertrophic cardiomyopathy should be avoided, since significant hypotension may result. Concomitant use of lithium and verapamil may result in a lowering of serum lithium levels or increased sensitivity to lithium. Patients receiving both drugs must be monitored carefully. Verapamil may increase carbamazepine concentrations during combined use. Rifampin may reduce verapamil bioavailability. Phenobarbital may increase verapamil clearance. Verapamil may increase serum levels of cyclosporin. Verapamil may inhibit the clearance and increase the plasma levels of theophylline. Concomitant use of inhalation anesthetics and calcium antagonists needs careful titration to avoid excessive cardiovascular depression. Verapamil may potentiate the activity of neuromuscular blocking agents (curare-like and depolarizing); dosage reduction may be required. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. Pregnancy Category C. There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor, and delivery only if clearly needed. Verapamil is excreted in breast milk; therefore, nursing should be discontinued during verapamil use.

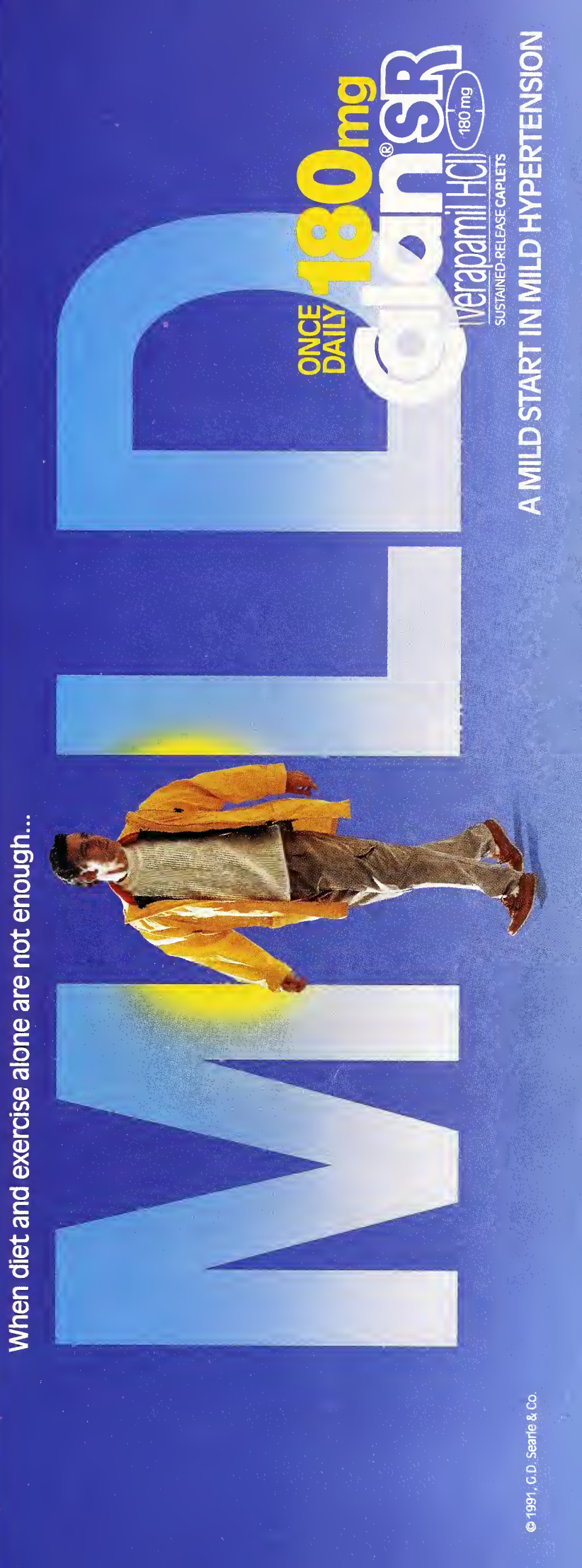
Adverse Reactions: Constipation (7.3%), dizziness (3.3%), nausea (2.7%), hypotension (2.5%), headache (2.2%), edema (1.9%), CHF, pulmonary edema (1.8%), fatigue (1.7%), dyspnea (1.4%), bradycardia: HR < 50/min (1.4%), AV block: total 1°,2°,3° (1.2%), 2° and 3° (0.8%), rash (1.2%), flushing (0.6%), elevated liver enzymes, reversible non-obstructive paralytic ileus. The following reactions, reported in 1.0% or less of patients, occurred under conditions where a causal relationship is uncertain: angina pectoris, atrioventricular dissociation, chest pain, claudication, myocardial infarction, palpitations, purpura (vasculitis), syncope, diarrhea, dry mouth, gastrointestinal distress, gingival hyperplasia, ecchymosis or bruising, cerebrovascular accident, confusion, equilibrium disorders, insomnia, muscle cramps, paresthesia, psychotic symptoms, shakiness, somnolence, arthralgia and rash, exanthema, hair loss, hyperkeratosis, macules, sweating, urticaria, Stevens-Johnson syndrome, erythema multiforme, blurred vision, gynecomastia, galactorrhea/hyperprolactinemia, increased urination, spotty menstruation, impotence.

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bulletin

NORTH CAROLINA MEDICAL SOCIETY

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Third parties getting you down?

Ask the ombudsman

In an effort to address the increasing complexity of third party policies and procedures and to provide members with current, relevant information, your Medical Society is now offering an ombudsman service. This service, which is provided free to members, will focus on promoting overall understanding of and resolving problems with government, private payers, professional review organizations, HMOs, PPOs and other entities affecting third party operations.

In order to provide this service effectively, a new staff position has recently been added. Gary K. Armistead, a native of Lexington, joined the staff January 1 as Executive Assistant, Third Party Relations. Gary has had considerable experience in a third party payer setting effectively identifying and resolving policy and procedural concerns. His experience is in private insurance as well as government programs. His educational background includes an undergraduate degree from UNC-Chapel Hill concentrating on managerial and economic concerns of healthcare delivery.

The focus of this new service will be on education and problem resolution. Some examples of problems and questions the service can address are:

- consistent denials even with appropriate documentation of medical necessity;
- appropriate responses to inquiries from MRNC;
- how to prepare the required notice to patients before "elective" surgery costing over $500 (for Medicare non-participating physicians);
- how and when to use notices that Medicare is "not likely to pay" for a specific service;
- how to file claims for services provided by a covering physician;
- waiver of co-insurance and deductibles for Medicare patients;
- how BC/BS's Costwise contract works.

The Ombudsman program cannot file or refile claims, provide legal representation at meetings and hearings, offer specific legal advice or participate in collective or individual negotiation of fees.

Each month, as part of this service, an article addressing a timely third party issue will be published in the *Bulletin*. See page 6 (Third Party Profiles) for the first article in the series.

If you need assistance from the Ombudsman service, please write to Gary Armistead at NCMS, PO Box 27167, Raleigh 27611 and include all pertinent documentation. Gary can also be reached at (800) 722-1350.

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Inside...

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A supplement to the *North Carolina Medical Journal.*

Regulating the reviewers

New regulations from the NC Department of Insurance have established minimum standards for utilization review (UR) entities and the utilization review plans used in conducting reviews. The rules require payers to do business only with entities that meet the standards and require payers who perform their own reviews to meet the standards as well.

Your Medical Society participated in the rule-making process by taking every opportunity available to submit written comments and present testimony at the public hearings. We made numerous suggestions to make the rules as effective as possible. Some of our suggestions were incorporated into the final rules and some were not. Despite the fact that the rules are not exactly as we would have written them, the regulation of utilization review entities is a step in the right direction. Many of you submitted individual comments and we commend you for getting involved in the policy-making process.

Our biggest success was convincing the Department of Insurance that before a UR entity renders a **noncertification** based on medical necessity you should be able to review the case with a **physician** representing the UR entity.

When are the regulations effective?
Within 120 days of February 1, 1991.

Are all payers subject to the regulations?
The rules do not apply to UR performed solely under contract with the federal or state government for review of patients eligible for Medicare or Medicaid, CHAMPUS or under any other federal employee health benefit plan.

What are the requirements for UR?

- Insured must receive advance notice of any prerequisites to approval of payment
- An appeals process must be provided
- A representative of the UR entity authorized to approve a UR determination must be available to insureds and providers 40 hours per week and the UR entity must have an adequate phone system
- For non emergency care, the UR entity must communicate its decision on the review no later than two business days after the initial request
- Insureds and providers must be informed of review requirements
- Agreements between payers and UR entities must contain usual total lengths of stay authorized for healthcare services
- Insureds and providers must be notified that compliance with UR requirements does not guarantee payment
- The confidentiality of insureds' medical records must be guaranteed

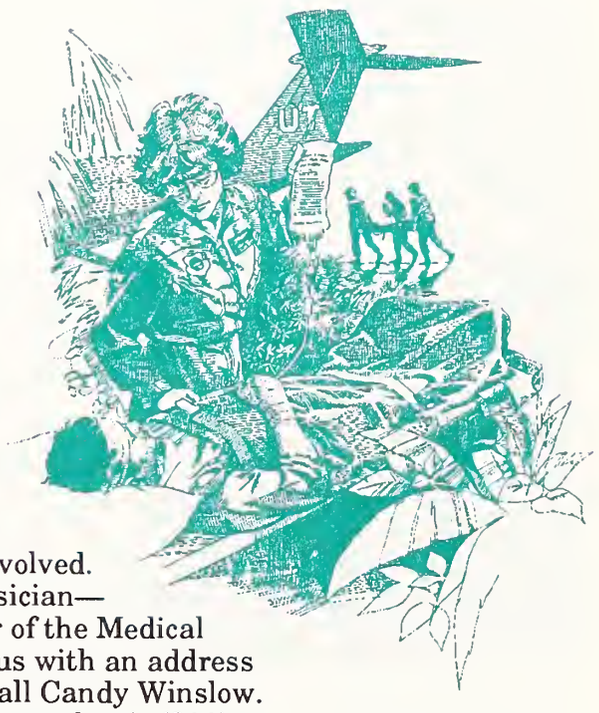
The rules define minimum standards for UR entities; prohibit requests for information that is unnecessary, duplicative, unduly burdensome or solely for the purpose of delay; and require that UR decisions be made in accordance with accepted current medical criteria established with input from "providers representing major areas of specialty and certified by the boards of the various American medical specialties."

If you would like a complete copy of the new regulations, call Susan Ford at (800) 722-1350.

bulletin

Published monthly by the North Carolina Medical Society as a supplement to the *North Carolina Medical Journal*. Reader comments and suggestions are welcome and should be directed to Bob Burns, Editor, *Bulletin*, North Carolina Medical Society, PO Box 27167, Raleigh, NC 27611, (800) 722-1350, FAX (919) 833-2023.

Dues waived for activated members



The escalating war in the Persian Gulf is beginning to take a toll on North Carolina as more and more physicians in reserve and National Guard units are called to active service. To honor and thank these doctors for their willingness to serve our country, and to help lighten their burden somewhat, the Executive Committee has voted to waive their NCMS membership dues while they are on duty.

Any North Carolina Medical Society member who has been called to active duty in the armed forces in response to this war, whether that service is in this country or abroad, is eligible for the military exemption. Members interested in taking advantage of the Executive Committee's action should call Deanna Godwin.

We're finding it very difficult to get the names and present addresses of the activated physicians or, for that matter, even to determine how many are involved. If you know of any physician—member or nonmember of the Medical Society—and can help us with an address for him or her, please call Candy Winslow.

The NCMS toll-free number is (800) 722-1350.

Voice your objections

Claims processing to suffer

Because of a shortfall in appropriations, the Health Care Financing Administration (HCFA) has reduced the operating budgets for all Medicare contractors. Here in North Carolina our Medicare contractor, Equicor, is facing a 16 percent reduction in administrative dollars allocated to Medicare Part B claims processing (not benefit dollars).

The impact of this on you is pretty straightforward. If you presently submit paper Medicare claims, processing currently takes an average of 16 days. Because of the budget reduction the average processing time for paper claims is expected to increase to over 60 days by September.

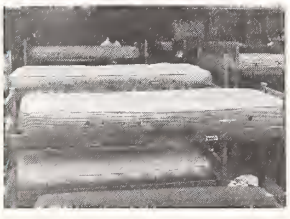
You may have already received a letter from Equicor indicating their displeasure with this situation and asking you to contact the administrator of HCFA directly and voice your concerns. Correspondence should be directed to Gail Wilensky, Administrator, HCFA, 200 Independence Ave., SW, Room 314-G, HHH Building, Washington, DC 20201.

"A stitch in time ..."



Student directors Frank Hobart and Barbara Dudley (above) at the end of a recent Clinic night. The "pharmacy" and the new bunk beds are pictured below.





There is an abundance of dedicated, generous, idealistic young doctors-to-be in Greenville these days. You can easily find them on any Monday evening conducting a medical clinic in a homeless shelter in physical conditions that make one think about medicine in the third world. On a recent evening the former auditorium of the Agnes Fullilove School contained brand new bunk beds for 60 men who had been sleeping on mattresses on the floor for the past three years.

Anywhere from three to thirty patients are seen in the Greenville Community Shelter Clinic on Monday nights between 7 and 10. They are the residents of the Shelter and, during our recent visit, all of them were being screened for TB while some were also being evaluated for other possible problems by medical students from ECU School of Medicine. The students, members of the NCMS Medical Student Section, founded and run the Clinic with admirable backup by members of the Pitt County Medical Society, some of whom provide free specialty care in their own offices for Clinic patients in need.

First and second year students take medical histories, temperatures and blood pressures, and for many this is their first interaction with a living patient. Third and fourth year students do the physical exams and then observe while the volunteer physician for the evening goes over what they have done and what needs to be done. Most people feel that the Clinic has taken some of the pressure off the Emergency Room at Pitt County Memorial Hospital. These homeless, at least, do not appear for emergency care as often as some others since they have access to routine care every Monday night.

Every piece of equipment in the Clinic has been donated, including an ophthalmoscope, of which the students are particularly proud. But there's precious little else. There is almost no budget. Patients are examined on a single bed in one of the two small rooms at the back of the stage, displacing the women and children occupants for several hours. Pharmaceuticals are scrounged from pharmacy company representatives and physicians, but the available ones lean heavily toward cardioactive drugs while analgesics, antibiotics and cold medications are in shorter supply. The drugs occupy a cabinet and a closet watched over closely by an enormous resident roach population.

"Just kick the door of the cabinet before you open it and most of the roaches will take off," was one useful suggestion. One wonders, given the number of brazen ones left in plain view, just how many more are hiding.

The first patient on a recent Monday evening was a real disappointment to his young interviewer: after eight months on the wagon he had fallen off badly, and a trip the same day to the local detox center had not gone well. Could anything be done to help him back onto the wagon? The response, after some thoughtful minutes of silence among the students,



A medical student takes a history from one Clinic patient (above). In the lower left corner are three young residents of the Shelter, who are pleased by the attention they receive from the medical students each monday night and who cooperate nicely with the photographer.

was a cautious "yes," but not until an appointment could be set up at the mental health center the next day. In the meantime, counsel, support, encourage.

This is not an uncommon problem. Robert Charlton, Director of the Shelter, estimates that 50-90 percent of the residents have serious drug and alcohol problems. Three out of four of them become intoxicated every day. One of the students' dreams for the future is enough funding to let them hire a substance abuse counselor to work with Shelter residents.

It is an understatement to describe the amenities of the students' clinic as primitive. But things may look better in the future. The building next door, no longer used as a school, will soon be renovated to provide transitional housing for some residents, and part of it has been offered to the students as a permanent clinic. A local contractor will do the necessary work for $25 per square foot, a total of just about $28,000. The new clinic will have two exam rooms, an office/extra exam room, a business office, waiting room and counseling room. Once the clinic has moved to its new location, the students have been told, they are more likely to qualify for foundation grants they are unable to attract now because their greatest need is for bricks and mortar (or, more precisely, sheetrock and toilets), not the usual objectives of granting agencies.



The medical students, each of whom has minimal time available to spend on clinic matters, have assembled a Board of Directors and are writing both a constitution and bylaws in order to qualify for the tax-exempt status they need to attract foundation funds. The co-directors of the clinic, second-year medical student Barbara Dudley and third-year Frank Hobart, run the clinic under the supervision of medical director David Lyman, MD, a member of the ECU Department of Family Medicine. Others involved in the operation of the clinic include both student and physician schedulers; a treasurer; public relations, pharmacy and equipment chairpersons; and a two person executive committee (last year's student directors) whose responsibility it is to write grant applications anywhere and everywhere.

The search for the $28,000 consumes much of the medical students' thoughts and energies these days. Fortunately for Shelter Clinic patients, there is enough of both left over to give them the help they need to achieve relatively good health for themselves and their young children.

As the residents trooped by to get their TB tests and the distinct odor of unwashed bodies wafted past, we had to ask: "How long does it take to get used to the smell?" "What smell?" the students asked in return.

Third-party profiles

As part of our new Third Party Relations service we are initiating an ongoing column to keep you informed about current topics and requirements. Topics will primarily relate to policies and procedures of third parties including governmental and private payers, professional review organizations and regulatory agencies affecting these entities.

Medicare physician payment reform

On January 1, 1991, the Maximum Allowable Actual Charge (MAAC) for nonparticipating physicians was replaced by a limiting charge. The limiting charge applies only to nonassigned claims and determines the amounts collectible from Medicare beneficiaries.

Charges for nonparticipating providers will be limited to the **lower** of the following:

- for non-primary services, nonevaluation and nonmanagement services: 125% of 1991 nonparticipating prevailing charge, or
- for primary care services, evaluation and management services: 140% of 1991 nonparticipating prevailing charge, or
- the percentage by which the 1990 MAAC exceeds the 1990 nonparticipating prevailing charge.

The example below illustrates the calculation for the **primary care** (140%) balance billing limitation.

A list of the primary care evaluation and management procedure codes, subject to the 140% adjustment factor, has been provided by Equicor. If you desire a copy of the 100+ codes, contact Equicor, Professional Relations, Medicare Administration, 7736 McCloud Road, Greensboro, 27409, (919) 665-0338; or NC Medical Society, Third Party Relations, PO Box 27167, Raleigh, 27611, (800) 722-1350.

Equicor workshops regarding Physician Payment Reform have been scheduled through February 27, 1991. If you haven't registered, it may still be possible to attend one of the final sessions. For registration information call (919) 665-0338.

Limiting charge calculation

	Dr. X	Dr. Y
A. 1990 MAAC	$32.50	$37.50
B. 1990 nonparticipating prevailing charge	$25.00	$25.00
C. Percent difference between A & B	30%	50%
D. 1991 nonparticipating prevailing charge	$30.00	$30.00
E. 1991 limiting charge: D + **lower** of C or 40%	$39.00	$42.00

President's message

Publication and mailing schedules dictate that this monthly column be written several weeks before you receive the *Bulletin*. Thus, today marks only the end of the first week of the war with Iraq which is likely to be still raging when you read this edition. North Carolina is heavily involved in the conflict through its many military bases and the call-up of reservists, including physicians and other health professionals. Those of us not directly involved can only pray for a quick, successful end to the conflict while doing all we can to support our colleagues and their loved ones who are so affected.

Meanwhile, life goes on here at home in spite of everyone's preoccupation with the Middle East. On January 30th, the 1991 Session of the North Carolina General Assembly began its work in what promises to be a long, arduous session because of the sputtering economy and revenue shortfalls. A portion of this work will involve decisions on policies that can affect how medicine is practiced as well as the type and quality of healthcare services our citizens may receive.

We and other healthcare providers should be optimistic about outcomes of the 1991 legislative efforts. Our interests and those of our patients will benefit from the presence and hard work of three physicians and two physician spouses who were elected last fall, and James P. Green, Sr, MD, will no longer feel like a "lone voice crying in the wilderness." Our governmental affairs staff and our legislative committee, chaired by Dave Bruton, expect their efforts will be facilitated by these five allies of medicine.

Leading the list of proposed legislation supported by the Medical Society is the establishment of a privately funded system to help pay for lifetime health services for children born in North Carolina with a birth-related neurological impairment resulting in an inability to control motor function, or cerebral palsy. For the past two years a Legislative Study Commission has been reviewing and developing draft legislation regarding this issue. The Commission is expected to introduce a bill which would establish a program whereby children will receive an array of services upon being deemed eligible, and in return they will relinquish their right to sue. The benefits here are obvious: all entitled children receive services quickly and needless lawsuits are avoided.

Another piece of proposed legislation supported by the Medical Society would extend Good Samaritan immunity to healthcare providers who offer free care at local health departments or non-profit community health centers. This legislation essentially builds on legislation passed in 1989 which gave Good Samaritan protection to physicians providing first aid or emergency care in these facilities. While this addressed emergency services it did nothing to facilitate routine or preventive health care for the medically indigent.
(See President, page 8)



Edwin W. Monroe

Edwin W. Monroe, MD
President

President

(Continued from page 7)

The new bill, if enacted, would encourage physicians to offer free care to persons who might otherwise have to do without needed services.

In addition to these initiatives, many other issues will be put forward for consideration. Expanding Medicaid eligibility for children, maintaining a viable role for the Children's Special Health Services Program, ensuring that hazardous waste is dealt with in a medically sound manner and lowering blood alcohol levels for a driver to be deemed impaired are just some of the important issues the medical community and Legislature will be debating.

I encourage you to get involved in this session of the General Assembly. Get to know your local legislators and keep them informed. Offer to be a source of medical information for them. The Medical Society's Legislative Department will be working hard for you during the coming months but they need your help. Legislators will listen to our representatives but they really respond to you, their constituents. Let them hear from you.

Deceased physicians

Charles William Brown, 76, Charlotte
John Ferrari, 67, Fayetteville
Robert Hadley Greene, 90, Charlotte
Vasanthi Immanuel, 46, Hillsborough
Charles Ernest Inman, 69, Fairmont
Benjamin Robert Koogler, Sr, 77, Candor
Horace William Miller, Jr, 68, Fayetteville
Norman Fritz Miller, 96, Boca Raton, FL
James Cobb Mills, Sr, 73, Wilkesboro
Fonzo Goff Prather, 91, Asheville
Millard McAdoo Riggs, 72, Morganton
Janifer Claudia Roberts, 42, Fairmont
Louis Gordon Sinclair, 83, Raleigh
Jeannette Ettinger Studenski, 74, Chapel Hill
Silas Owens Thorne, Jr, 66, Morehead City
Cam Thomas Troilo, 86, Hampstead
F. Stafford Wearn, 83, Statesville
Martha Jane Wilson, 57, Chapel Hill
Alfred Louis Wolfe, III, 71, Morehead City

Noted

The Medical Society and the Rehabilitation Medicine Committee have nominated **Ulrich Alsentzer, MD,** for the 1990 Health Care Professional of the Year Award given by the Governor's Advocacy Council for Persons With Disabilities. Dr. Alsentzer is Chairman of the Department of Physical Medicine and Rehabilitation at East Carolina University School of Medicine.

Don't miss your *Layman's Guide*

Accompanying this issue of the *Bulletin* and *Journal* is your copy of *The Layman's Guide to Death with Dignity.* This 12-page booklet, created by the NCMS Bioethics Committee and unanimously approved by the House of Delegates in November, is available to you in large quantities for distribution to your interested patients. An order form/envelope is bound into the center of *The Layman's Guide.*

The booklet is the product of a group of physicians, attorneys, clergy, ethicists, emergency medical personnel, nurses and representatives of nursing homes, hospitals, hospices and home health agencies. They feel that *The Layman's Guide* meets the needs of a public increasingly concerned that they not face a death like that of Nancy Cruzan.

Take a look at *The Layman's Guide* and order copies for your office if you wish.

The child in 2000 AD

Southeastern health professionals specializing in maternal and child health, family planning and children with special health needs can learn more about related programs and policies at a regional conference in Chapel Hill April 14-17, 1991.

The 18th annual MCH conference, "Services to Women and Children Are More Than Year 2000 Objectives and Block Grants," is sponsored by the school of Public Health, department of Maternal and Child Health, University of North Carolina at Chapel Hill, and the March of Dimes Chapters of the Southeast.

Plenary sessions will include a review of Year 2000 Objectives, health issues concerning women of color, adolescent health, AIDS and other sexually transmitted diseases and maternal and child health block grants. Workshops will cover the impact of demographic trends on service providers in the Southeast, women and children and substance abuse, family planning issues, case management, use of outcome data for program planning and evaluation, grant writing and youth in transition.

To register, contact Phyllis Woody, Registrar, Office of Continuing Education, UNC School of Public Health, CB #8165, Miller Hall, Chapel Hill, 27599-8165; (919) 966-4032.



Legally speaking...

Q I am the President-Elect of our medical staff and, in that capacity, I chair our Bylaws Committee. At a recent Bylaws Committee meeting, the issue of whether or not we should amend our current medical staff bylaws to include information on the National Practitioner Data Bank (NPDB) was raised. What is the current thinking on this matter?

A The National Practitioner Data Bank has been in operation since September 1, 1990, although numerous commentators believe that some operational and computer confidentiality problems have not yet been appropriately addressed. As of December 1990, the NPDB was behind 50,000 inquiries.

The American Medical Association has suggested that medical staffs and hospitals carefully review medical staff bylaws, credentialing procedures, rules and regulations, and medical staff policies to ensure that the substantive and procedural requirements of the NPDB are in place. While there is not consensus over whether or not the following suggestions *must* be placed in the medical staff bylaws, it is my suggestion that bylaws be revised to include the following:

1. an acknowledgment by an applicant or reapplicant for privileges that the hospital's designated individual will contact the NPDB for information on the practitioner;
2. a report to the Board of Medical Examiners of any professional review action that adversely affects the clinical privileges of a physician for a period longer than 30 days;
3. a report to the Board of Medical Examiners of the hospital's acceptance of the surrender or restriction of clinical privileges of a physician while under investigation by the hospital relating to issues of incompetence or improper professional conduct, or in return for not conducting such an investigation or proceeding;
4. a report to the Board of Medical Examiners of any revisions of final professional review actions;
5. admission into an impairment program is not reportable if the physician voluntarily enters the program and clinical privileges are not suspended for 30 days or longer.

For items 1 and 2 above, the Board of Medical Examiners must receive the information within 15 days from the date of the adverse action taken by the governing body; the Board must then submit the information from the hospital to the NPDB within 15 days of its receipt of the information.

Also, it is important to note in the bylaws that the reporting to the Board does not occur until a final decision is rendered by the governing body. Thus an investigation, a report by an ad hoc investigating committee, or a decision by the Medical Executive Committee that may be adverse to a practitioner is not a reportable event.

NOTE: This article is not intended to provide the physician with specific legal advice. If you have a legal problem, seek the assistance of a qualified attorney. If you have a legal question of broad application, send it to Arlene J. Diosegy, General Counsel, North Carolina Medical Society, PO Box 27167, Raleigh 27611, for a response via this column.

Workshops improve practice productivity

The North Carolina Medical Society, in cooperation with the American Medical Association, will sponsor a four-day series of workshops for medical office staff, April 9-12, at the Embassy Suites Hotel in Greensboro. A brochure on the workshops is included with this issue of the *Bulletin*. Participants may register for selected workshops or for the entire series.

This is the third year this series of workshops has been offered by the Medical Society. The workshops are designed to enhance efficiency and productivity in practice operations. Prepared and taught by experts, the series provides an effective training resource for all members of the medical office team, including office managers, medical assistants and physicians.

New Alamo discount plan

The Medical Society's endorsed Alamo Rent A Car program has established a new easy-to-understand discount system. Under the new program Medical Society members will receive a two dollar per day discount on daily retail rates and a 5 percent discount on weekly rates. Alamo also offers unlimited free mileage nationwide, frequent flyer credits (Delta, United, PanAm, Alaska Air) and other benefits.

You should receive your Alamo identification card with your 1991 membership card. If you do not and would like to receive one, call Patricia Strickland at (800) 722-1350.

For Alamo Rent A Car Reservations call (800) 327-9633 and request the Medical Society plan "BY" 213386 (this number also appears on your Alamo card).

Buy-sell agreements

A little known provision in the new tax law may change the way buy-sell agreements are structured. In the past, doctors have often paid for their share of a practice largely by agreeing to take a lower salary for several years, which meant they paid with pre-tax dollars. The new tax law, however, requires anyone owning 10 percent or more of a business to notify the IRS if he sells part of his interest and provide any details requested about the transaction. This may effectively prevent doctors from paying for practice shares with pre-tax earnings. The law applies retroactively to October 9, 1990.

For additional information contact Don Wall at (800) 722-1350.

Calendar...

February 22 **Doctors on Call,** WRAL-TV, Raleigh, from 9:00am to 9:00pm. Contact Penny Hodgson at (919) 833-3836 or (800) 722-1350.

February 22 **Indigent Health Care Conference** at the Wake County Department of Health. Co-sponsored by the NC Medical Society and the Urban Ministry Center of Raleigh. Contact Anne Sales at (919) 832-0820 or Alan McKenzie at (919) 833-3836.

March 20-21 **Durham-Orange County Medical Society Mini-Internship Program.** Contact Penny Hodgson at (919) 833-3836 or (800) 722-1350.

March 20-24 **North Carolina Academy of Family Physicians 43rd Annual Scientific Assembly** at the Sheraton Imperial Hotel, Research Triangle Park. Contact Sue Makey at (800) 872-9482.

April 9-12 **NCMS/AMA Medical Office Staff Seminars** in the Raleigh/Durham area. Contact Lucy Gross at (919) 833-3836 or (800) 722-1350.

April 19-21 **Fourth Annual National Conference on Professional Well-Being** at the Sheraton University Center in Durham. Contact Marjorie Harrison, Conference Coordinator, at (919) 419-0011.

April 20 **Doctors on Call,** WLOS-TV Asheville, from 9:30am to 7:30pm. Contact Penny Hodgson at (919) 833-3836 or (800) 722-1350.

April 24-27 **1991 NCMS Spring Conference** at the Pinehurst Hotel and Country Club in Pinehurst. Contact Alan Skipper at (919) 833-3836 or (800) 722-1350.

June 6-8 **NCMS/AMA Young Physicians Seminars** in Greensboro. Contact Lucy Gross at (919) 833-3836 or (800) 722-1350.

July 5-7 **21st Annual Sports Medicine Symposium** at Wrightsville Beach. Contact Alan Skipper at (919) 833-3836 or (800) 722-1350.

March 1991

bulletin

NORTH CAROLINA MEDICAL SOCIETY

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Just what the doctor ordered

The diagnosis is winter doldrums, the treatment is a trip to Pinehurst, the cure is the Medical Society's annual Spring Conference. From April 24 to April 27 attendees will find high quality presentations, informative committee deliberations, political and legislative events and a slew of recreational activities.

As in the past, the Conference will have three separate components. A Leadership Symposium, held on Thursday the 25th and Friday the 26th, will address important issues facing medicine today. A dinner Friday evening will kick off the Legislative Symposium with an educational session for legislators and physicians offered the following morning. The third portion of the Conference is the meeting of the Society's committees. Different committees will meet on each day of the four-day conference.

Leadership Symposium April 25-26

"The Physician as the Patient's Advocate" is the theme for this year's Leadership Symposium. Mounting public concern over healthcare costs has diverted much time and attention from the essence of physician's practices, i.e., taking care of patients. The demand from both the private and public sectors to overhaul the "system" requires physicians to sharpen their focus on the needs and best interests of their patients. Through presentations concerning rationing, ethical quandaries, informed decision-making and end-of-life issues, the Symposium will center on the relationship between the physician and the patient.

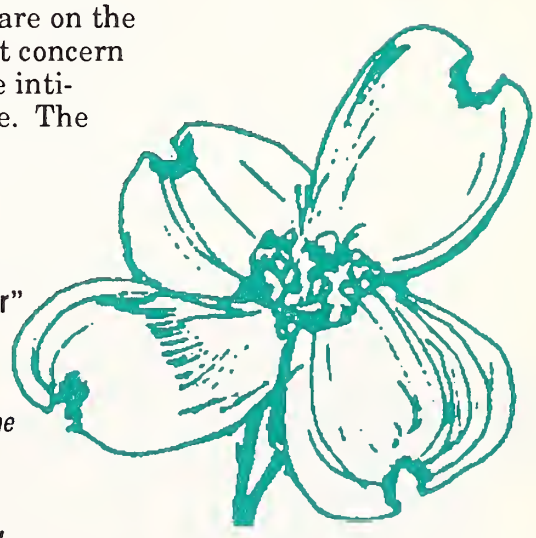
Nationally known speakers are on the program to address subjects that concern and sometimes perplex everyone intimately involved with health care. The agenda looks like this:

Thursday morning, April 25

"What This Patient Needs Is a Doctor"
Eugene A. Stead, Jr, MD
Editor NC Medical Journal,
and Professor Emeritus,
Duke University School of Medicine

"Learning From Our Patients: The New Social Medicine"
Joseph A. Lieberman, III, MD, MPH
Professor and Chairman,
Department of Family Medicine,
UMDNJ/Robert Wood Johnson Medical School

(See Conference page 2)



Inside...
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Incoming wounded .....page 4
Third party profiles.....page 10

A supplement to the *North Carolina Medical Journal.*

Conference

(Continued from page 1)

"The Ethics of Rationing: The Fact and Extent of It"
Robert E. McAfee, MD
Vice-Chairman, Board of Trustees, American Medical Association

"Health Care at the Beginning of the Third Millennium"
Douglas Henderson-James
Senior Analyst for Glaxo

Friday morning, April 26

"Decision Making and the Elderly: Individual Choice and Societal Influence"
Donald J. Murphy, MD
Assistant Professor of Health Care Services, George Washington University Medical Center

"Health Care Delivery in the Age of Cost Containment"
John J. Paris, SJ
Professor of Bioethics, Boston College

"End of Life Issues: The Right to Die in North Carolina"
George A. Ragland, Esq.
Chairman, Estate Planning and Fiduciary Law Section, North Carolina Bar Association

"What This Doctor Needs Is a Patient"
Clifford R. Guy, MD
Vice-President and Medical Director, Winston-Salem Health Plan

Legislative Symposium April 26-27

On Friday evening the Legislative Symposium begins with a reception honoring members of the General Assembly followed by a dinner featuring US Representative Martin Lancaster (3rd Congressional District) as the keynote speaker. The Congressman will address the problem of access to high quality affordable health care by all citizens of this country. On Saturday morning, physicians and legislators will hear an explanation of The Cerebral Palsy Trust Fund Bill, which the Medical Society strongly supports. Following this will be a panel composed of physicians and legislators who have been involved with the development of the legislation, to answer questions about the Fund and how it would operate.

Later in the morning attendees will hear a presentation by Bo Bobbitt, legislative consultant to the Medical Society, on right-to-die issues and the NCMS-supported bill on durable power of attorney. This will be followed by brief presentations on 1) state purchase of children's vaccines for administration in private physicians' offices; 2) protection of facilities used for medical research on animals; and 3) Good Samaritan exemption for physicians providing free, non-emergency care.

Committees

Committees will be holding their meetings Wednesday, April 24 and the afternoons of Thursday, April 25, Friday, April 26 and Saturday, April 27.

bulletin
NORTH CAROLINA MEDICAL SOCIETY

Published monthly by the North Carolina Medical Society as a supplement to the *North Carolina Medical Journal*. Reader comments and suggestions are welcome and should be directed to Bob Burns, Editor, *Bulletin*, North Carolina Medical Society, PO Box 27167, Raleigh, NC 27611, (800) 722-1350, FAX (919) 833-2023.

Y'all come on down

If hooking a king mackerel or a blue has ever been in the back of your mind or on your wish list, block out June 14 and 15 for a trip down east. Taking advantage of their location by the ocean, Wilmington's doctors and lawyers have a fishing tournament, a one-day-on-the-high-seas event that they are opening to any doctor-lawyer groups in the state this year. You're invited.

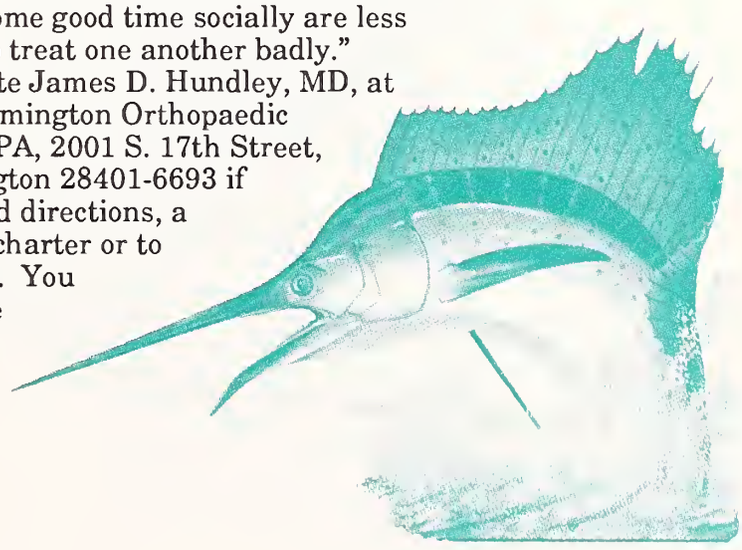
On Friday, June 14, the members of the New Hanover-Pender Medical Society and the New Hanover Bar Association will host a shrimperoo for themselves and their invited guests (that's you), which will include a highly praised and hilarious skit in which physicians play attorneys and attorneys play physicians. As for the shrimperoo, suffice it to say that the food will be fresh, delicious, local and plentiful.

On Saturday, June 15, the Third Annual Shyster-Quack Shootout (honest, that's what they call it) will begin at 8:00am with a shotgun start from the Bridgetender Marina on Wrightsville Beach. Fish will be officially weighed at the same site between 2:00pm and 4:00pm, and an awards ceremony will follow at 4:30pm. They may decide to have a raft-up in Banks Channel for or after the awards ceremony as well, and you'll never know what a raft-up is if you don't take part in the tournament.

There is no entry fee for the fishing tournament since the prize seems to have as much to do with bragging rights as with monetary value. There aren't many rules either. The most important requirement is that those who come provide their own boats (or charter one locally) and that each boat must carry both physicians and lawyers. The smartest idea, and the one most likely to foster local doctor-lawyer collegiality, is to form fishing teams in your own area and then contact Jim Hundley, MD, to register and/or for help in finding a boat to charter.

Dr. Hundley's is likely the fine mind behind this tournament and, more importantly, someone on his boat has landed the winning fish each of the past two tournaments. (A Wilmington orthopaedist, he is the captain of the *Plaster Cast III* when he's not on call.) In a recent letter regarding the tournament, he wrote: "I don't know whether or not this sort of thing is worthwhile but we believe that those who share some good time socially are less likely to treat one another badly."

Write James D. Hundley, MD, at The Wilmington Orthopaedic Group, PA, 2001 S. 17th Street, Wilmington 28401-6693 if you need directions, a boat to charter or to register. You won't be sorry.

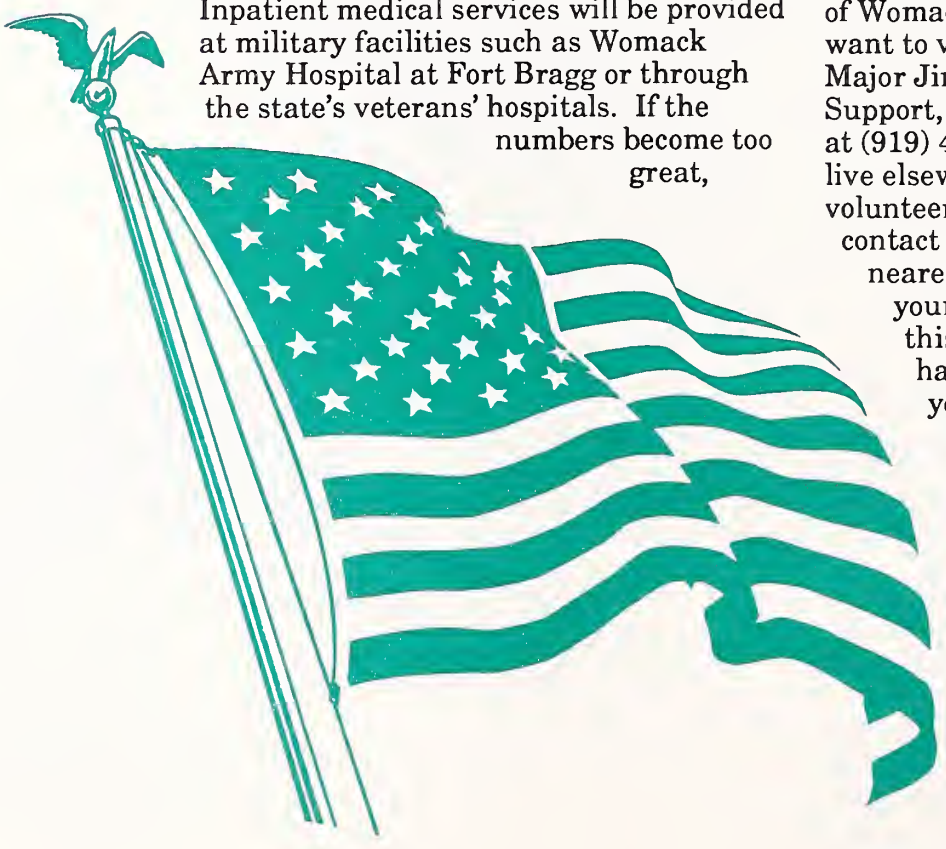


Incoming wounded

They went. They did their job. And now they will need your skills.

We are talking about our troops in the Persian Gulf, North Carolina men and women who have been injured and brought back home for treatment. You can volunteer your medical services to help them.

Although the armed services have hospitals designated and personnel trained to handle wounded service personnel, they are going to need assistance. Inpatient medical services will be provided at military facilities such as Womack Army Hospital at Fort Bragg or through the state's veterans' hospitals. If the numbers become too great, community hospitals designated and managed by the Federal Emergency Agency will be used.



The Department of Defense and the American Red Cross have a memorandum of understanding which permits professional volunteers to be used and certifies them as employees of the United States for the purposes of the Federal Tort Claims Act, thus overcoming professional liability problems.

If you are located in the general area of Womack Hospital (Fayetteville) and want to volunteer your services, contact Major Jimmy Sanders, Chief for Clinical Support, at Fort Bragg. He can be reached at (919) 432-7576 or (919) 432-6913. If you live elsewhere in the state and wish to volunteer should your help be needed, contact your local Red Cross office or the nearest veterans' hospital. Although your services may not be needed at this time, by acting now you can have your credentials compiled, your privileges approved and your Red Cross orientation completed. This advanced preparation will help immensely in the event your services are needed.

A salute

As this edition of the *Bulletin* goes to press we know that the following physicians have been called to active duty by the armed services. We wish to thank them for their service to our country.

Avery	Wayne Martin, MD
Brunswick	Charles Locke, MD Gene Wallin, MD
Craven	Harry Ballard, MD Curtis Mostellar, MD
Cabarrus	Hector Henry, MD
Cumberland	Stanley Gilbert, MD
Davidson	Blane W. Yelton, Jr, MD
Buncombe	Emery Williams, MD
Henderson	Robert Bailey, MD
High Point	Gary Biesecker, MD George Kilpatrick, MD Clarence Lloyd, MD Paul Long, MD Helen Stinson, MD
Lee	Clairborne Mosseley, MD
McDowell	Mark McQuire, MD
Mecklenburg	James A. Campbell, MD Thomas Carr, MD Robert Farquharson, MD Jill Hendra, MD William Hughes, MD Steven R. Keener, MD Paul Perlick, MD
Mitchell	David Cort, MD David Larsen, MD
Moore	Michael Daley, MD George Henderson, MD Peter Jacobson, MD
New Hanover-Pender	Thomas W. Debeck, MD Hetzal Hartley, MD
Robeson	George Mozingo, III, MD
Rockingham	James McKay, MD
Translyvania	James Tyson, MD
Union	Alexander Synder, MD
Vance	Cornelius Cathcart, MD
Wake	Jeffrey Board, MD James S. Fulghum, MD Cliff Patterson, MD
Others:	Jesse Cavenar, MD Daniel Gooding, MD David Janeway, MD Thomas C. Leitner, MD Walter Minor, MD Mark Peacock, MD George K. Sabah, MD

If you know of any other physician—member or nonmember of the Medical Society—who has similarly been called up please contact Candy Winslow. The NCMS toll-free number is (800) 722-1350.

It's in the bank

As of January 11, 1991, the National Practitioner Data Bank had received 252,945 inquiries from medical entities (mostly hospitals). This avalanche of requests has resulted in a significant delay in the time it takes the Bank to respond to queries. Delays also occur because of incorrect or incomplete forms submitted by those requesting information.

To request information on yourself (self query) submit a Request for Information Disclosure form (call (800) 767-6732 for a form). If, however, you never received a notification that a report was filed on you (Practitioner Notification Document), then the Bank has no information on you.

If you request information be sure to:

- Use and sign the official Request for Information Disclosure form.
- Provide all required information.
- Indicate type of query, e.g., "privilege or employment," "professional review;" or "self query."
- Make any supplemental forms correlate with the main form.
- Use the prescribed three-digit code that indicates type/category of profession.
- Send forms to: National Practitioner Data Bank, PO Box 6050, Camarillo, CA 93011-6050.
- Tell the Data Bank if you have formally designated an agent to request information for you.
- Avoid answering questions with the term "not applicable." The Bank regards that response as inappropriate.

Due to the large backlog of requests, the Bank is giving first priority to queries about a single physician as opposed to requests for information on groups of physicians.

Nothing in the law or regulations bars hospitals from granting staff privileges before the facility receives information from the Bank. Hospitals should continue to complete their usual review process since the Bank "does not replace all the traditional review mechanisms already in place."

The Bank had received 6,866 reports on malpractice payments and adverse actions on physicians as of January 11, 1991.

You can order a copy of the National Practitioner Data Bank Guidebook for $7.50 by calling (202) 783-3238. The Data Bank help-line number is (800)767-6732.

Take two aspirin and a lawyer

Should you be invited to a meeting with the North Carolina Board of Medical Examiners you are well advised to retain an attorney to go with you. Attorney representation is an important concern for all those who will ever appear before the Board.

The Board generally notifies physicians by letter requesting them to appear before a panel of the Board for what is called an "informal hearing." In the notice, the Board states that you may or may not bring an attorney. Many physicians have gone to these informal hearings without an attorney, only to discover that they should have brought one. The reasons for this vary. For example, some physicians believe that they will be discussing patient records or the issues in question in a collegial manner. It is not the intention of the Board, however, to conduct an informal hearing in the same manner as a medical peer review to which physicians are accustomed.

Physicians who have attended Board "informal hearings" have described them variously as "very intense," "detailed" and "like the Spanish Inquisition." The Board very seriously questions these doctors' practices and the doctors typically feel outgunned as they try to defend themselves. Therefore, should you receive a notice to appear before the Board, secure the services of an attorney to assist you. If you are called to the Board for a formal show cause hearing, you should have your case prepared very carefully with an attorney.

If you do not know an attorney who is knowledgeable about Board proceedings, call the NCMS General Counsel at (800) 722-1350 for a recommendation.

Names in the news

William A. Gillespie, MD, was recently appointed the new Medical Director of The Southeast Permanente Medical Group (TSPMG) of North Carolina. TSPMG provides care to 108,000 Kaiser Permanente members in the North Carolina Region. The Medical Group has 115 physicians.

Dr. Gillespie, a pediatrician, joins the North Carolina region from the Texas Region's Permanente Medical Association of Texas where he most recently held the position of vice president and associate medical director for the Region's two service areas. Prior to that, he was the associate medical director of the Terrant County Area and concurrently physician-in-charge of that area's two medical offices.

Dr. Gillespie is a 1976 graduate of the University of Virginia School of Medicine, where he completed his pediatric residency in 1979. He is board certified in pediatrics and is a fellow of the American Academy of Pediatrics.



Hepatitis B - Get your shot

According to the North Carolina Division of Epidemiology, hepatitis B is now an entirely preventable disease. While a highly effective vaccine has been available since the early 1980s, a high percentage of at-risk healthcare providers still remain unvaccinated, and over 12,000 new hepatitis B cases are reported among healthcare providers in the US each year. These cases result in approximately 600 hospitalizations and 300 deaths annually.



At its 1990 Annual Meeting the NCMS resolved to "encourage all at-risk healthcare workers to be vaccinated for hepatitis B." We are told that North Carolina OSHA may soon implement new requirements that employers provide hepatitis B vaccine to their at-risk employees—those exposed through their work to blood and blood products.

The currently available vaccines (Recombinax HB from Merck, Sharp and Dohme and Engerix B from Smith, Kline and French) are both recombinant products that contain no human plasma components and thus pose no risk for transmission of HIV or other human pathogens. Serious adverse reactions to these vaccines are extremely rare. The adult dosing schedule for both vaccines calls for an initial dose followed by additional doses at 1 month and 6 months. There is currently no recommendation from the Centers for Disease Control for booster doses. An adult dose of Recombinax HB is 5 mcg; of Engerix B, 10 mcg.

If you have questions about these vaccines, please call William Price, MD, NC Division of Epidemiology, at (919) 733-3419.

President's message

Attending meetings as a representative of the NCMS is one of the duties of its president that cannot be fully appreciated prior to assuming the office. These opportunities seem almost unlimited at times and not all are of noteworthy interest to all members. Two in particular, however, deserve mentioning—one just completed and the other scheduled for late April.

Recently I attended the 2nd Doctors and Lawyers at the Crossroads Seminar co-sponsored by the Medical Society and the Health Law Section of the North Carolina Bar Association. Once again it struck me how complex and involved it is for physicians to practice medicine in today's environment. Questions of professional liability, regulation of referral relationships, laws dealing with business issues and relationships with the Board of Medical Examiners all present potential legal nightmares for us daily. But perhaps what I received most from this seminar was a better sense of the legal profession itself: the groups that comprise it, the constraints it operates under and the benefits to society and to the medical profession specifically that it offers.

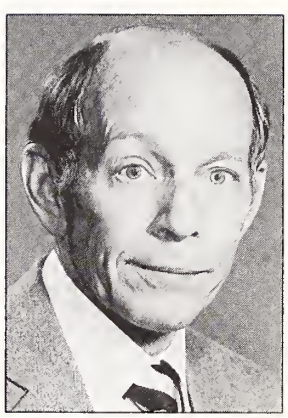
Upon leaving this meeting I couldn't help but think that much of our suspicion of all lawyers is misdirected. We really enjoy good relations with most of the legal profession. It is the plaintiff's bar or more accurately a few members of this group that have caused many physicians to be critical of lawyers as a whole. This group's actions, unfortunately, have blinded us to the positive contributions being made by other members of the bar. Health law attorneys, business attorneys, defense and even those plaintiff attorneys who provide access to the courts for the needy are all providing valuable services to the public. There is much we can learn from these professionals and much we can share with them. Forums like Crossroads are an excellent way for this to occur.

Speaking of excellent forums, the Medical Society's annual Spring Conference (see page 1) is almost upon us. As in the past, this year's Conference offers a plethora of events from which to choose. Leadership and legislative symposia, committee meetings and recreational activities all await those who attend. You will have the opportunity to hear knowledgeable individuals in the healthcare and legislative fields discuss issues that impact on the way you practice medicine.

This year's Leadership Symposium has as its theme, "The Physician as the Patient's Advocate." Advocacy for our patients is one of the most important roles we have as physicians. If we don't advocate, then who will? Certainly not insurance carriers or governmental agencies.

The Legislative Symposium will be looking at access to health care as well as discussing issues that make up part of the Medical Society's legislative package. There are many significant legislative initiatives being put forth by your Medical Society. There will be members of the

(See President page 14)



Edwin W. Monroe

Edwin W. Monroe, MD
President



Third-party profiles

1991 Medicare fee schedule

Recently, you should have received from Equicor a prevailing and limiting charge fee schedule for 1991. The twenty procedure codes listed in your fee schedule may or may not include **your** most frequently performed services. Unfortunately, HCFA mandated that Equicor publish only the twenty most frequently used codes for your specialty and location. If you want data for additional codes, send a written request stating the specific codes you need to Professional Relations, Equicor, Medicare Administration, Box 671, Nashville, TN 37202.

Contractors get $75 million from OMB

As reported in the February *Bulletin*, HCFA projected significant delays in Medicare paper claims payments if contingency funds were not released by the Office of Management and Budget. GOOD NEWS: On Tuesday, January 29, OMB agreed to release $75 million (of the $101 million requested) in contingency funds for insurance companies that process Medicare claims. The release of funds follows a firestorm of protest from a variety of groups to convince OMB the funds were needed to insure smooth and timely processing of an increasing number of Medicare claims. The "budget shortfall" was a result of Congress underestimating claims volume for 1991.

Help us help you

The North Carolina Medical Society Third Party Relations program is concerned about administrative and/or claims problems you are having with the "Big 4"—Medicare, Medicaid, Blue Cross/Blue Shield and commercial carriers. We would like to receive and maintain an ongoing catalog of these problem areas to determine what policy and/or procedure modifications may be helpful. To help in this, please send copies of all your correspondence with insurance carriers to Gary K. Armistead, NC Medical Society, PO Box 27167, Raleigh 27611.

He will use the information you sent to highlight those areas that are creating the most problems for you and your patients. If you require assistance or consultation regarding the problem, attach a cover letter explaining your request and enclosing any other relevant documentation. Please make it clear if you are requesting individual assistance; otherwise, the copies will be used as statistical references only so that we can effectively work with third parties to identify and resolve problem areas.

Prevailing charge determination

The following is a brief review of how HCFA determines prevailing charge amounts. A detailed discussion of "Balance Billing Limits" (i.e., non-participating limiting charge) was published in the

February issue of the *Bulletin*.

Medicare Part B payment is based on the lower of the following:

1. Actual Charge— the charge submitted on a specific claim.

2. Customary Charge— the charge a physician or supplier usually bills most patients for the same service.

3. Prevailing Charge— lowest charge high enough to include at least 75% of the charges for the same service billed by all physicians or suppliers in the same area (see chart below).

Participation Status

The previous discussion pertains only to charges upon which Medicare payment is based. Amounts collectible from the patient are determined by your participation status:

- Non-Participating: physician may collect up to the "limiting charge" for non-assigned claims. Of course, if assignment is accepted on any specific claims, collection is allowed only up to the lower of the actual, customary and prevailing charge.
- Participating (accepting assignment on all Medicare patients): physician may collect only up to the lower of the actual, customary and prevailing charge.

Method to Determine Prevailing Charge

Customary Charge for a CPT Procedure	Number of Procedures Done	Cumulative Number of Procedures Done
$5.00	1402	1402
$6.00	1115 (+1402) =	2517
$7.00	1680 (+2517) =	4197
$8.00	803 (+4197) =	5000

75% of 5000 procedures= 3750 procedures which fall within the $7.00 range ($7.00 because 3750 is greater than 2517 but less than 4197) Result: Prevailing charge for procedure = $7.00

Patients to pick physicians on March 1st

Carolina ACCESS is a new Medicaid program that will contract with primary care physicians to deliver and coordinate health care for Medicaid recipients. Sponsored by the North Carolina Department of Human Resources (Division of Medical Assistance) and the North Carolina Foundation for Alternative Health Programs, the program will be implemented in twelve counties over the next two years. The following counties have been selected for the first phase: Durham, Edgecombe, Henderson, Moore and Wilson. Primary care physicians in these counties or in contiguous counties can elect to participate.

Participating physicians will provide most of the primary care services and coordinate access to all other needed medical services, including after hours care. They will receive a monthly coordination fee (in addition to normal Medicaid payments) for each patient they see under the program. A participating physician may serve up to 1,200 Carolina ACCESS enrollees.

Beginning March 1, Medicaid eligible persons in the pilot counties will select a participating physician. Participating physicians may begin to see Carolina ACCESS enrollees as early as April 1.

The Division of Medical Assistance hopes that linking a person eligible for Medicaid with a primary care physician will create a more efficient arrangement for delivering and coordinating care to that person. Funding for the program comes in part from the Kate B. Reynolds Health Care Trust.

Over the next year, seven more counties will be selected for Carolina ACCESS participation. Physicians or counties interested in participating may obtain more information by calling (800) 228-8142.

No smoke

Effective March 1, 1991 smoking will not be allowed in the Medical Society's Headquarters Building. This new policy is the result of action taken by the NCMS House of Delegates at the 1990 Annual Meeting. Smoking will only be permitted outside the building at a designated area.

On a related note, the Mecklenburg County Medical Society and their Auxiliary have adopted smoke-free policies both at their meetings and office. These actions were also taken in response to the NCMS House of Delegates resolution.

Stressed out?

The Fourth Annual National Conference on Professional Well-Being, presented by the Society for Professional Well-Being, will be held April 19-21, 1991, at the Sheraton University Center in Durham. The purpose of this conference is to provide people in the professions, their spouses and their colleagues, with information, support and training for self-care and stress reduction in a friendly and accepting atmosphere. Conference sponsors include the North Carolina Medical Society, the American Medical Association, the National Wellness Institute and the American Holistic Medical Association.

Highlights of the conference will be presentations by Redford Williams, MD, of Duke University and Doris Howell, MD, of the University of California, San Diego. Dr. Williams, the author of *The Trusting Heart: Great News About Type A Behavior*, will discuss "Trusting Hearts Last Longer: Countering Your Hostility." Dr. Howell's topic will be "A Man for All Seasons." For additional information contact Marjorie Harrison at (919) 419-0011.

Let's talk Prosthetics prescribing

In 1989, Equicor-Medicare instituted a policy change for the reimbursement of lower limb prostheses to address certain discrepancies in claims submission. During repeated meetings in 1990 between Medicare, prosthetists and physicians, a large gap in knowledge led to misunderstanding among the three parties.

During the 1980s prosthetic technology increased rapidly. Physicians were asked to prescribe the detailed components of prostheses out of their field of expertise. Medicare was asked to reimburse for prostheses without guidelines regarding the medical necessity of the components. The result was confusion and inappropriate responses.

To help resolve this problem an educational seminar will be held on Saturday, May 11, 1990, at the Embassy Suites Hotel in Greensboro, for physicians, prosthetists and Equicor-Medicare. The meeting will be under the auspices of the Rehabilitation Medicine Committee of the North Carolina Medical Society chaired by Angus McBryde, Jr, MD. We hope that such cooperative efforts in an educational setting will be a pattern for addressing and resolving other differences.

If you are interested in attending this seminar, contact Kelly Fry at the NCMS office by calling (919) 833-3836 or (800) 722-1350.

It pays to stay

North Carolina has probably suffered more than any state from economic disruption secondary to the Gulf War. All such setbacks eventually affect physicians and their practices. During times of belt-tightening, you may wonder whether your membership in this professional organization is worth the annual dues.

What does the NCMS do for you that makes sense economically?

- Using the Society's endorsed programs can easily save you more than your annual dues ($325 for an actively practicing physician). For example;
  —the discount on disability and office overhead insurance for an individual physician is likely to be around $450 a year;
  —the discount on the purchase of one fax machine through MEDPLAN is typically about $400;
  —discounts on supplies purchased through Dillard Health Care Services will be between 10 and 20 percent.
- The Society's staff offers a wide range of free services to its members including general legal advice from our General Counsel, assistance with third-party payer problems and general practice management information.
- Using the NCMS member rate when attending an NCMS-AMA sponsored seminar could save as much as $80 per attendee.
- Specialty section meetings at the NCMS Annual Meeting and Spring Conference offer excellent opportunities to earn CME credits with no tuition or registration costs.

Most people join professional organizations for representation and to protect the future health of their profession, but keep in mind these tangible reasons for Medical Society membership. If you would like more information about any of the Society's services, call Margaret Woodcock or Alan McKenzie at (800) 722-1350.

President

(Continued from page 9)

General Assembly attending the symposium, so it will be an excellent time to discuss with them these initiatives and other concerns you feel need to be addressed.

In addition to the symposia, the committees of the Medical Society will be meeting throughout the four-day event to discuss issues, some of which will take the form of resolutions which will go before the Executive Council and the House of Delegates.

So, as you can see it will be an exciting and educational time for all. I hope you will join us in Pinehurst for what has become one of the premier events conducted by the Medical Society.

How we use it

The North Carolina Medical Society receives numerous requests from organizations and individuals seeking copies of our mailing list. Our policy permits us to rent the list if we determine that the product or service would be of interest to our members or their families. The Medical Society does not, however, endorse or advocate any product or service, except those that have our specific endorsement.

If you do **not** wish to be on the mailing list, please send the coupon below to the Medical Society. If you do not respond, you will continue to be on the mailing list for these purposes.

I do not wish to have my name on the mailing list the North Carolina Medical Society makes available to organizations and individuals.

Print Name _____ **Date** _____

Signature _____

Return to: NC Medical Society, Katherine Moore, PO Box 27167, Raleigh, NC 27611

For the bad times

In August 1987, the NCMS and the Office of Emergency Medical Services solicited physicians to become a part of a volunteer program to provide services in the event of a statewide or regional disaster. The response to the program has been not only successful but overwhelming. As of December 1990, 72 physician members were listed by the registry as available for response to emergency situations.

Physicians' names and numbers are stored in a central registry maintained by the Office of Emergency Medical Services. Physicians will be contacted only in the event of a major occurrence requiring their expertise. There is no obligation other than a willingness to be listed.

We are again offering you the opportunity of becoming a part of this worthwhile effort. If you are willing, please fill in the information below and return to Don Wall, NCMS, PO Box 27167, Raleigh 27611.

Name: _____ **Specialty:** _____

Address: _____

Phone: (Office) _____ **(Emergency)** _____

Previous Emergency Management Experience (if any): _____

_____

Calendar...

March 20 **2nd Annual Risk Management Symposium "1990's Malpractice Crisis: Real or Imagined"** at the Ramada Inn, Greenville. Contact James E. Elderidge, JD, at (919) 783-5657.

March 20-21 **Durham-Orange County Medical Society Mini-Internship Program.** Contact Penny Hodgson at (919) 833-3836 or (800) 722-1350.

March 20-24 **NC Academy of Family Physicians 43rd Annual Scientific Assembly** at the Sheraton Imperial Hotel, Research Triangle Park. Contact Sue Makey at (800) 872-9482.

March 23 **Physicians Supporting Youth HIV Education** at the Sheraton Imperial Hotel, Research Triangle Park. Contact Alan McKenzie at (919) 833-3836 or (800) 722-1350.

April 4-6 **NC Society of Ophthalmology Annual Meeting** at The Omni Hotel, Charleston, SC. Contact Carol Russell at (800) 722-1350.

April 9-12 **NCMS/AMA Medical Office Staff Seminars** in the Greensboro area. Contact Lucy Gross at (919) 833-3836 or (800) 722-1350.

April 19-21 **Fourth Annual National Conference on Professional Well-Being** at the Sheraton University Center in Durham. Contact Marjorie Harrison, Conference Coordinator, at (919) 419-0011.

April 19-21 **NC Ob-Gyn Society Annual Meeting** at Pinehurst. Contact Carol Russell at (800) 722-1350.

April 20 **Doctors on Call,** WLOS-TV Asheville, from 9:30am to 7:30pm. Contact Penny Hodgson at (919) 833-3836 or (800) 722-1350.

April 24-27 **1991 NCMS Spring Conference** at the Pinehurst Hotel and Country Club in Pinehurst. Contact Alan Skipper at (919) 833-3836 or (800) 722-1350.

June 6-8 **NCMS/AMA Young Physicians Seminars** in Raleigh/Durham. Contact Lucy Gross at (919) 833-3836 or (800) 722-1350.

July 1-6 **Mid-Summer Family Practice Digest** at the Kingston Plantation/Radisson Resort Hotel, Myrtle Beach, SC. Contact Sue Makey at (800) 872-9482.

July 5-7 **21st Annual Sports Medicine Symposium** at Wrightsville Beach. Contact Alan Skipper at (919) 833-3836 or (800) 722-1350.

September 11 **13th Annual Health Law Forum, "Physician Accountability: Legalistic Overkill?"** at the Ramada Inn, Greenville. Contact James E. Elderidge, JD, at (919) 783-5657.

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Bulletin

NORTH CAROLINA MEDICAL SOCIETY

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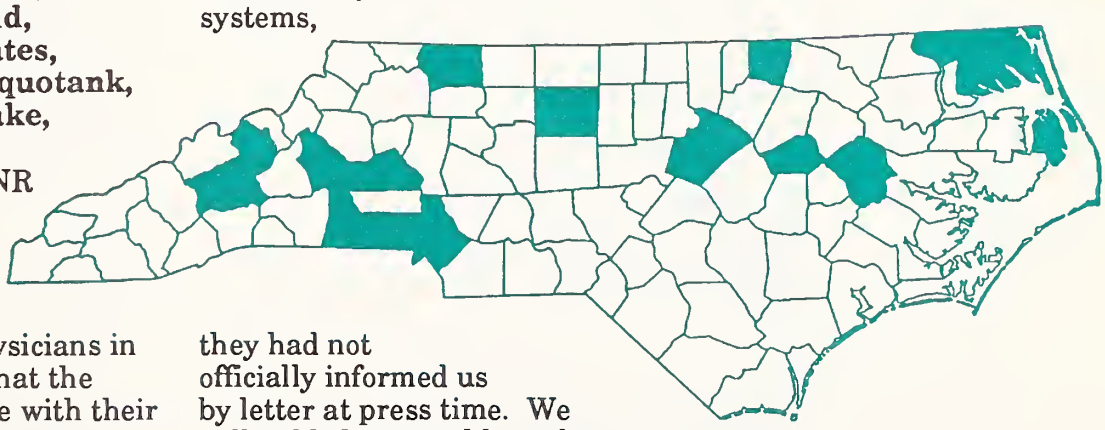
STOP Do Not Resuscitate™

We told you in April that you can soon begin to use an out-of-hospital do not resuscitate order for your patients dying at home. After we secured the endorsement of the Attorney General's office (in December), all 575 emergency medical service providers in the state were told about the new form (in March) and given the chance to decide whether or not to honor it in their county.

Thus far, **Buncombe, Burke, Camden, Catawba, Cleveland, Currituck, Dare, Gaston, Gates, Guilford, Mecklenburg, Pasquotank, Perquimans, Pitt, Surry, Wake, Warren, Wilson and Yancey counties** have accepted the DNR form, which means that emergency medical personnel there **will not resuscitate** a person with this specific DNR form by his or her bedside. Physicians in these counties have been told that the forms are available for their use with their dying patients who live in one of those counties. They can get 25 copies of the form apiece by requesting them in writing from the North Carolina Medical Society. If you have patients in those counties you can also use the form for them even if your practice is not in one of those counties.

Hospices, nursing homes and home health agencies are also being informed when the DNR order is accepted in their counties, but the source of the form will always be the attending physician.

While we anticipate acceptance by other county EMS systems,



they had not officially informed us by letter at press time. We will publish a monthly update in future *Bulletins*, listing the counties in which the form can be used, until all 100 counties are in the fold.

Doctors interested in discussing the adoption of the DNR form in their county are urged to contact the Medical Director or the Emergency Services Director of their county EMS system. Questions about any details concerning the DNR order should be directed to Penny Hodgson at the NCMS ([800] 722-1350).

Inside...

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Washington .....page 8

A supplement to the *North Carolina Medical Journal.*



Legally speaking...

Q I practice in an academic medical center and I am often asked to review cases of alleged malpractice and to provide opinions. While I do not hesitate to assist my colleagues and perform what I consider to be a public service, I find I am greatly inconvenienced by attorneys' failure to use videotaped depositions. A videotape deposition would save money in the long run and would keep me from having to constantly rearrange my patients' appointments because of a court's schedule. Can depositions be videotaped in North Carolina?

A North Carolina does permit videotape depositions. According to Rule 30(b)(4) of the North Carolina Rules of Civil Procedure, deposition testimony can be taken by videotape. If a party intends to use a videotaped recording of a deposition, the party must tell the person that the deposition will be recorded by videotape. Further, the person being deposed must be sworn prior to giving testimony, and depositions must be videotaped accurately and kept according to the rules of court.

Thus, check with your attorney to see if a videotape deposition can be used rather than a court appearance.

If you have any questions about videotape depositions, do not hesitate to contact the NCMS General Counsel at (800) 722-1350.

Malpractice suit?

If you are being sued for malpractice and would like to talk to a colleague who has been there, the North Carolina Medical Society has a service you should know about. It is called the Malpractice Support Group. This group comprises physicians who have experienced a malpractice suit and are available to counsel others who need their help.

If you would like to talk with someone in the group, call us at (800) 722-1350 and ask for the Malpractice Support Group. We'll put you in touch with a physician who wants to help. If you are a member who has been sued and would like to help other physicians, you're welcome to call also.

bulletin
NORTH CAROLINA MEDICAL SOCIETY
Published monthly by the North Carolina Medical Society as a supplement to the *North Carolina Medical Journal*. Reader comments and suggestions are welcome and should be directed to Bob Burns, Editor, *Bulletin*, North Carolina Medical Society, PO Box 27167, Raleigh, NC 27611, (800) 722-1350, FAX (919) 833-2023.

Med Bowl II: $125,000 spectacle

We told you one year ago about the immensely successful fledgling effort at fundraising by the Forsyth-Stokes-Davie County Medical Society, which raised over $85,000 to benefit the Crisis Control Ministry Pharmacy. Well, they did it again on May 2nd, and they upped their financial success by $40,000.

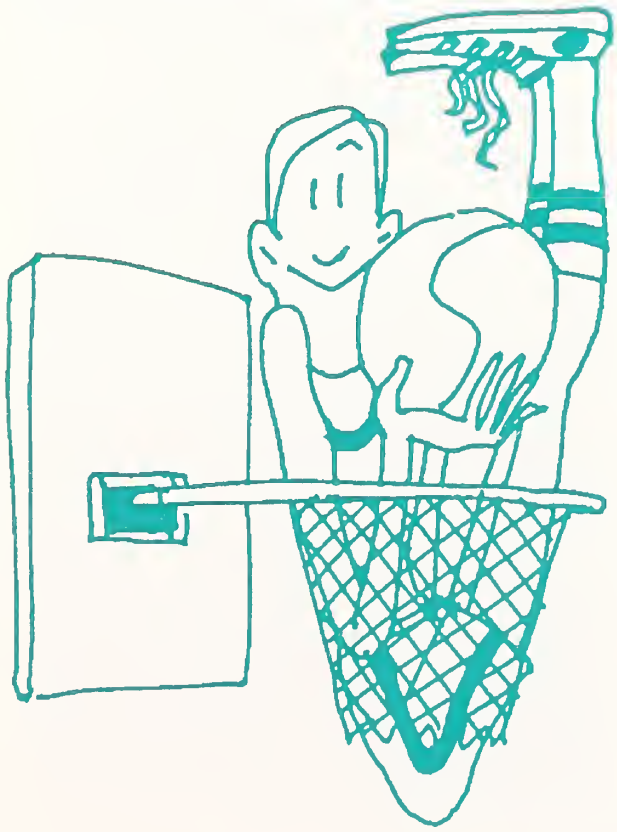
The first Med Bowl — "Doctors' Charity Basketball Game & Spectacle" — was held in a high school gymnasium in Winston-Salem, and the crowd was so much larger than the facility that they decided to move it to Memorial Coliseum this year. And they half-filled that! The two basketball teams were the Forsyth Flash (from Forsyth Hospital) and the Deacon Docs (from North Carolina Baptist Hospital).

Forsyth won the women's game 21-18, and Baptist won the men's game 36-24. There were more than 100 player participants, including the cheerleaders — the real reason so many people came to watch! The cheerleaders are male, but you have to look at least twice to be sure. *Outrageous* is an appropriate descriptor.

Ask Jim Robinson, Executive Director of the Forsyth-Stokes-Davie Medical Society, how many man-hours went into preparing for Med Bowl II and he will hem and haw and then say, wearily, "You can't imagine." Later on in the conversation he will say, "Well, for instance, Margaret McCain, the Auxiliary's chairman, spent four months full time on it."

Med Bowl II honored healthcare personnel from the counties involved who served during Operation Desert Storm, seating them in a special area right on the sidelines and recognizing them by name during halftime activities.

Med Bowl is a labor of love, a family outing that is fun and entertaining, a sporting event that the players take very seriously and a public relations success within the entire community. It's also a forum for cooperative activity between medical societies and their auxiliaries.



Rob and Susan's excellent adventure

He's a UNC graduate, class of 1987. She graduated from DePauw the same year. Top of their classes, strong students with good grades, lots of involvement in their communities and their institutions of higher learning—in short, right attractive candidates for graduate school.

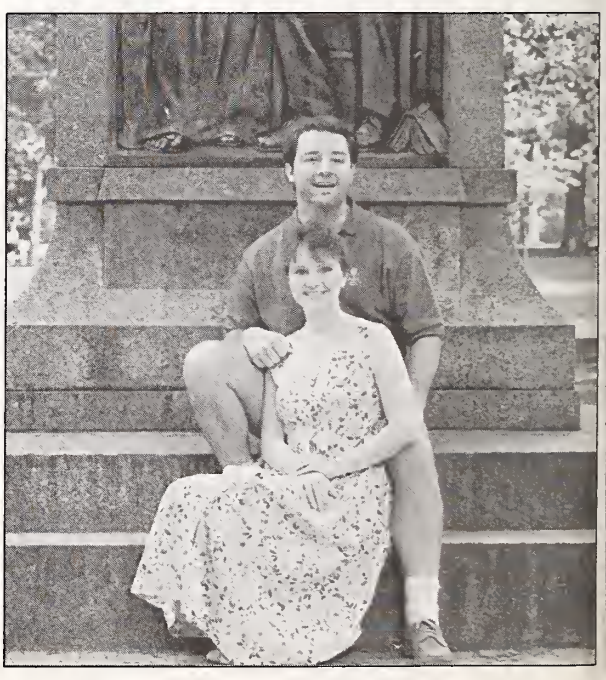
They both chose medicine, both chose Bowman Gray. They met there, fell in love, married in 1990, graduated May 20th, 1991. Meet J. Robert Anderson, MD, and Susan McLendon Anderson, MD, two young, newly-minted physicians who are already a credit to your profession.

While the Andersons are leaving North Carolina for three year (Rob in family practice) and four year (Susan in obstetrics and gynecology) residencies in Indianapolis, they say they will be back, probably in 1995. Besides their medical degrees, the Drs. Anderson take with them a $95,000 debt for their medical educations, a debt that would have been even greater (around $125,000) had they both not received grants and scholarships all four years at Bowman Gray. For graduates of a private medical school, this story is typical.

For their first year of residency, Rob and Susan expect to earn about $45,000. "It'll be really nice not to be poor," says Rob. Susan counters quickly that they will still pinch pennies, hoping to live on one salary (rent, food, the loan on Rob's Acura Integra), and start to save for a house in Indianapolis and to pay back their educational loans ($700 a month at first) with the other salary.

When Rob and Susan went for their exit interview at Bowman Gray to discuss just how much in debt they were, they found that Susan had not been credited with a $1,000 grant her final year and had therefore borrowed that last thousand dollars. So the Financial Aid Office wrote her a check for that amount, probably the largest amount of money they've ever had in their short married life. "It was great," says Susan. "It will pay for half of our move to Indianapolis."

Medical students can almost always find sources of funds to finance their education, but the variety of conditions



and payback arrangements is bewildering and, eventually, intimidating. Rob and Susan both have loans from the State of North Carolina that could be forgiven in four years if they were willing to go to assigned underserved sites in the state for four years following their training, much like the nearly defunct National Health Service Corps. The problems they see with that are the possibilities of each of them being assigned to a different part of the state and, more importantly, of being moved each of the four years. For a young couple planning a family, that's more than they're willing to sacrifice, so they'll pay those loans back in full. The interest rate will climb dramatically if they fail to return to North Carolina to practice.

One of the first moves newly arrived medical students make is to join the American Medical Students Association, a group that competes directly with the AMA and the NCMS medical student sections. The reason they join AMSA is that they automatically save $30 on the deal since they qualify as $45 members for a $75 credit on scholarship loans they can get through AMSA. The AMA has no such fund for medical student borrowing, and the $20 it costs a medical student to join the NCMS looms large when they consider the final tally for their education may approach $100,000.

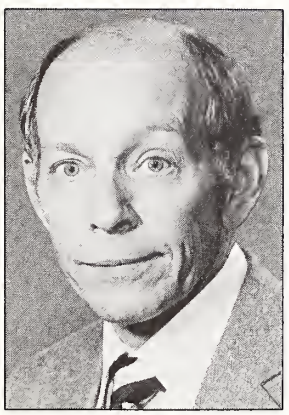
Rob and Susan Anderson have been a credit to your profession as medical students involved in their local medical society, the North Carolina Medical Society and the American Medical Association for the last several years. They have represented you well as leaders of the Medical Student Section both within the state and nationally. Both have contributed importantly to the functioning of the NCMS MSS, and Rob served as Chairman

"It'll be really nice not to be poor."

in 1990-91. The improvements he instituted and the organization he created will make the section run much smoother next year (with Jeff Dattilo of ECU as Chairman) and thereafter.

We intend to keep in touch with the Andersons over the next four years, talking with them semiannually and bringing you up to date on their activities as they pursue their specialty training. They are symbolic of the reality of the medical profession today: they are deeply committed, they are deeply in debt, they are a dual doctor family about to embark on the next chapter of an exciting, excellent adventure. We wish them well.

President's message



Edwin W. Monroe

Edwin W. Monroe, MD
President

"Of all men's miseries, the bitterest is this—to know so much and to have control over nothing."

When Herodotus penned those words some 2,500 years ago, I doubt he was referring to the practice of medicine. But, many physicians today seem to feel just as helpless and hopeless—helpless in the face of the national debate about change in our healthcare system and hopeless about the future of medical practice.

Physicians understand the problems and challenges of patient care better than anyone else. What we tend to do, however, is to leave it to others to dictate policies that affect how that care is given and to whom. Our passivity contributes to the huge gaps in the healthcare system whereby almost one million North Carolinians have no ready access to care.

Your Medical Society is not passive about the access problem. It is involved in a number of approaches that promise easing of access for those most in need because of their economic plight.

Carolina Access

A demonstration project sponsored by the North Carolina Department of Human Resources (Division of Medical Assistance) and the North Carolina Foundation for Alternative Health Programs, Carolina Access aims to develop more efficient arrangements for delivering and coordinating health care for Medicaid recipients. Funded in part by the Kate B. Reynolds Health Care Trust, Carolina Access seeks to demonstrate that by coordinating the delivery of services, recipients will have improved access to quality health care delivered in the most cost-efficient manner.

Over the next two years twelve counties will participate in the project, which began March 1st. Medicaid recipients in these counties will be matched to participating primary care physicians who will deliver and coordinate care for them. These physicians will receive a monthly coordination fee (in addition to normal Medicaid payments) for each patient they manage under the program.

In May the NCMS Executive Council recommended endorsement of Carolina Access. This recommendation will now go to the House of Delegates in November.

Medicare Partners

In this program developed by the North Carolina Medical Society, non-participating Medicare physicians agree to accept assignment for patients who are at or below 200% of the federal poverty level ($13,240 for a single person, $17,760 for couples). This program aids elderly patients who otherwise might not seek care because of concerns about meeting out-of-pocket expenses which exceed Medicare allowable amounts for physicians' services.

Presently Wake, Catawba, Buncombe, Mecklenburg and Greensboro medical societies have pilot programs in place and pilots in Pitt and Lee counties are in the planning stages. These programs rely on a variety of local organizations to identify eligible patients. The North Carolina

Division of Aging has recently agreed to assist in the expansion of this program by using its local offices to provide administrative support to component medical societies.

Caring program for children

A project of the NC Council of Churches and recommended for NCMS endorsement by the Executive Council, this program provides funds to pay the health insurance premiums for children of "working poor" families. These may be single parent families where the parent earns minimum wage or large families in which the chief wage earner either gets no health insurance at work or has coverage that excludes dependents.

Funds to run the program and pay the children's insurance premiums come from donations made by charitable foundations, businesses, churches, civic groups and individuals. Blue Cross and Blue Shield of North Carolina underwrites the medical insurance which is designed to keep premium cost low ($20 a month) while providing for preventive services and outpatient care for these children.

Basic benefits package

The concept envisions a minimum package that would serve as a "floor" for medical insurance policies. Interested groups (including the AMA, numerous specialty societies and state government agencies all over the country) are drafting proposals for a minimum package of health benefits in an effort to define a product that will prove affordable to small employers and individuals. Those targeted for coverage are the working poor, people who do not qualify for a government subsidized program but who cannot afford the health insurance products currently available.

Your Society feels it is vital that the physicians of our state—not just the insurance companies and representatives of industry—have a say-so in what benefits are included in such a plan. As advocates for our patients, we must make sure that any "floor" for health care allows for adequate preventive care that has proved cost-effective as well as appropriate medical services that will permit us to deliver high quality care to individuals covered by such services.

The NCMS Health Care Access Committee has been assigned the task of developing recommendations for a basic level of insurance coverage. These recommendations will be submitted to the North Carolina Institute of Medicine which is attempting to build a consensus among healthcare providers and others on a plan to address the needs of the state's uninsured and underinsured.

These programs and processes are making a difference. No single approach is the best or most correct. A combination of programs and policies will most likely move us to that time when every citizen of our state will have access to the healthcare system. Medicine at the national, state and especially local level must be involved in this process. We say we are patients' advocates; now let's prove it.



Washington

Here it comes

The new Medicare physician payment system will begin on January 1, 1992. Between now and then a number of issues dealing with its implementation will be resolved. At this writing, we are waiting for HCFA to publicize another set of proposed rules. This will be the final opportunity for you to review and comment on the new system and its implementation. You will have 60 days from the time this set of proposed rules is issued to comment.

Many issues of importance are being addressed and some have a greater impact than others. Below are those parts of the new system we feel bear your close scrutiny.

How reimbursement will be determined

Three components will determine how you will be reimbursed: 1) relative value units; 2) geographic practice cost indices (GPCIs); and 3) a monetary conversion factor.

Relative value units

Relative value units are composed of measurements of physician work, practice cost and professional liability cost.

The measurement of physician work reflects time and intensity required to furnish a service. HCFA plans to base the practice cost and professional liability insurance cost components of the payment schedule on 1989 national average Medicare allowed charges—updated to 1991. Then they will determine the average percentage of each specialty's revenues that is accounted for by practice costs and professional liability insurance costs. These percentages will be combined with data on the frequency with which services are provided by physicians in each specialty to develop an average practice cost and professional liability insurance cost percentage for each service.

The Physician Payment Review Commission recently recommended another method to calculate the practice cost component. It would derive practice costs from accounting data on physician practice expenses specific to services and categories of related services. We will soon learn which method is to be used.

Geographical adjustments

Each component of the relative value unit (work, practice cost and professional liability cost) will be adjusted for differences in costs between localities. One of the criticisms is that the GPCIs for practice costs are based on proxies, e.g., using residential rent for commercial office space rent, since there is no readily available data set to describe differences by geographic region. The proposed rules are expected to include updated geographic practice cost indices.

(See Washington page 9)

Washington

(Continued from page 8)

The Physician Payment Review Commission has recommended statewide payment areas except in states with high intrastate price variation. This recommendation would have to be acted on by Congress before it could be implemented. Thus, it will not be a part of the proposed rules.

The monetary conversion factor

The law establishing the new Medicare payment schedule mandates that it require no more funds in its first year than it would have under the present system (budget neutral). In order to accomplish this HCFA is considering a "behavioral offset" or "volume offset" based on their assumption that you will increase the volume of your services to offset reductions in payment. The AMA has argued that there is no evidence to support this assumption and an offset is not necessary. There was an extensive explanation of this issue in the May *Bulletin*.

Other issues

There are a number of other implementation issues, e.g., coding revisions, global surgical packages and site of service adjustments, to be addressed in the proposed rules. We plan to review the document carefully and prepare comments to HCFA. If you would like to review the rules or some part of them in order to provide your own comments, contact Deborah C. Nelson at the North Carolina Medical Society at (800) 722-1350.

A further salute

In the March edition of the *Bulletin* we expressed gratitude to those physicians who had been called to active duty by the armed services. Since then we have received additional names of physicians called up. We would like to publicly thank them by sharing their names with you.

Beaufort
- Charles D. Edwards

Burke
- Ahsanuddin Khaja

Carteret
- Joseph Esposito
- Richard Bloomfield

Cleveland
- Francis Sincox

Cumberland
- Paul Vieta
- Leonard Reaves
- Paul Greenberg
- Wayne Whetsell
- Tempest Lowry
- Tinsley Rucker
- Stephen Kouba

Durham-Orange
- Andre Muelenaes
- Art Chandler
- Abe Walston
- Juan Alva
- Donald Serafin
- James Carter
- Stuart Manning
- John Carr

Forsyth
- Jeffrey Berman
- Walt Curl
- David Hood
- Mark Maier
- Donald Prough
- Lawrence Webb
- David Janeway
- Charles Tara

Guilford
- John C. Mundy

Lee
- Bruce W. Rogers

Onslow
- Brady Way

Pitt
- Walter Pories
- Theodore Sunder
- Charles Brown

Wake
- Paul Kayye

Watauga
- Lynn D. George

Wayne
- Lawrence C. Bandy

Doctors on Call in Raleigh, Asheville

The Doctors on Call programs continue to be unqualified successes throughout the state. One was held in Raleigh at WRAL-TV on February 22nd and another in Asheville at WLOS-TV on April 20th.

The WRAL program reaches 21 counties and has the largest concentration of North Carolina Medical Society members in the state. Over 100 physicians answered anonymous questions by telephone for twelve hours. When the last phone was disconnected at 9pm, more than 2500 calls had been answered. According to AT&T, an additional 40,000 calls were unable to get through.

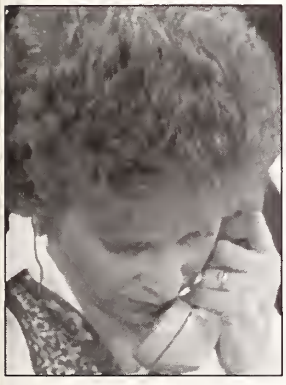
The much smaller television market served by WLOS-TV encompasses 13 counties in North Carolina and several more in South Carolina. Nearly fifty doctors answered telephones there for ten hours in April, completing over 1300 calls. WLOS also did two hours of live programming, conducting interviews with Medical Society members on such subjects as death and dying, mental illness, infant mortality and children's issues.

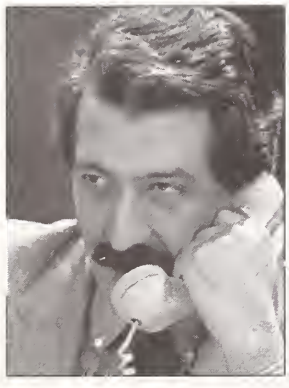
The following two lists include the names of the physicians from the WRAL-TV viewing area and the WLOS-TV viewing area who gave two hours to respond to the questions called in by the public.

WRAL

Edward Burton, Jr ... Rick L. Potts ... Richard Torrey ... Michael Pike ... Lisa A. Tolnitch ... Thomas W. Maddox ... G. A. Sellers ... Mark Nichols ... Charles A. Cook ... Eleanor B. Easley ... Eric Rappaport ... Eugene Granger ... Susan A. Watson ... Ralph A. Liebelt ... Don Bynum ... Barry Ostrow ... Billy W. Royal ... Harold R. Silberman ... Thomas B. Cole ... Harry W. Barrick, Jr ... Mike Fetters ... Lewis H. Stocks ... John Agayoff, Jr ... Robert T. Harris ... Myra L. Teasley ... Susan J. Joyner ... Michael Lancaster ... Robert C. Vanderberry ... Guido Gutter ... Joan Stets ... Ken Leatherman ... Manfred S. Rothstein ... Marion B. Pate, III ... Edward S. Stanton ... C. A. Eure ... Richard D. Serano ... Leon Woodruff, Jr ... Cynthia Hampton ... J. Stuart McCracken ... David A. Rockwell ... Assad Meymandi ... Emily A. Keram ... Natalie Sadler ... Robert H. Bilbro ... Bruce B. Blackmon ... George H. Moore, Jr ... Ben Vernon ... Kirt Hobler ... William F. Bobzien, III ... David H. Gremillion ... James S. Parsons ... Michael J. Kushner ... Beth R. Friedland ... David L. Sappenfield ... T. B. Dameron, Jr ... W. Bradley White ... Robert P. Majors, Jr ... John S. Howie ... Robert B. Winslow ... Charles A. Daniels ... Bernard LeBenson ... John R. Langley ... James G. Scanlan ... Priyavadan M. Shah ... Robert E. Clark ... M. H. Baloch ... William W. Hedrick ... James E. Davis ... Milton D. Quigless, Jr ... Maurice N. Courie ... Barbara Fleming ... Edward B. Yellig ... Lloyd F. Redick ... Michel Goubran ... Paul Andrews ... Walter E. Davis ... Edward McG. Hedgpeth, Jr ... Bennie L. Jarvis ... Indu Varia ... J. Gray McAllister, III ... Kathleen Riley ... Georjean Stoodt ... Roger B. Russell ... Mahesh A. Varia ... Mark W. McClure ... Alvan W. Atkinson ... Millard W. Wester ... H. D. Tyndall ... James B. Dingfelder ... Ken Fortier ... Thomas Greer ... Vivian Clark ... Gene Price ... John Glasson ... Louis C. Almekinders ... B. J. Ferguson ... Francis de Marneffe ... Nicholas E. Stratas ... Robert G. Crummie ... William Wood ... Elliot J. Kopp ... Jerome P. Parnell ... Joseph D. Whisnant, Jr ... Stephen F. Shaban

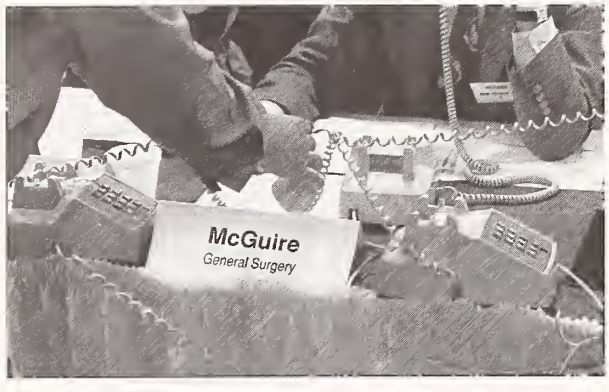
Networking

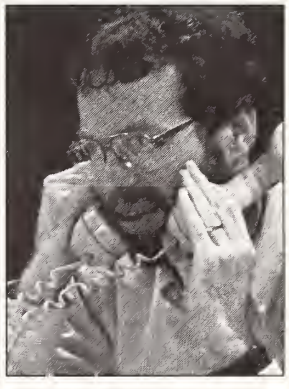










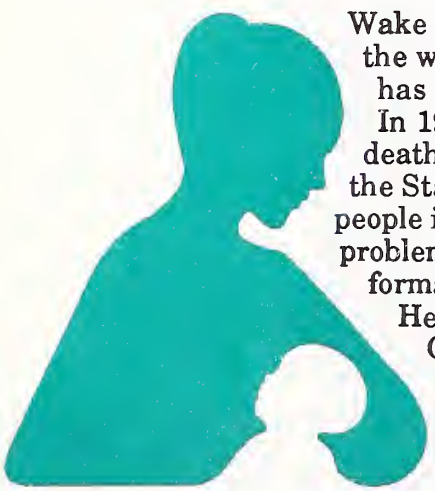


WLOS

Carter S. Bagley ... David A. Brown ... Robert C. Gunther ... Brad Huggins ... Bruce Kelly ... Richard N. Lind ... John Giles ... Edward Isbey, Jr ... Sean Maloney ... John McGuire ... James Payton ... Duff A. Rardin ... Richard L. Smith ... Edwin L. Smolowitz ... James S. Thompson ... Richard F. Walton ... Cynthia Brown ... Margaret Burke ... Leon Elliston ... Rick Felix ... Michael S. Heller ... Edward K. Isbey, III ... David Mauterer ... Ronald L. Terry ... William Anixter ... J.S. Atwater ... Simon D. Braun ... Alan D. Friedman ... John W. Garrett ... Ronald L. Godbold ... Joe Hurt ... Michael J. Messino ... Bruce I. Minkin ... Robert Pozner ... James Volk ... Robert E. Wiggins ... Steve Buie ... Ken Cosgrove ... Matthew Hahner ... Alan Kreuger ... Suzanne Landis ... Terry Lee ... Richard McBurney ... Joseph Noto ... James B. Powell, II ... Charles C. Thomas ... Mark A. Yarborough



Healthy mothers, healthy babies



Wake County—second in size and one of the wealthiest counties in the state—has a very high infant mortality rate. In 1989, the county's rate of 11.9 deaths per 1,000 live births exceeded the State rate of 11.0. What are the people in Wake doing to address this problem? One response has been the formation of the Healthy Mothers, Healthy Babies Coalition of Wake County. Begun in 1990 to increase community awareness of the high infant mortality rate and to bring together community volunteers to address the problem, the Coalition comprises representatives of business, industry, healthcare professionals, churches and civic organizations.

"It's been said that infant mortality is a social problem with medical consequences," relates Anita Quigless, Coalition President. "We've opened new clinics and are seeing more patients, more times during their pregnancy, but still too many women receive too little or no prenatal care."

There are five task forces with over 60 volunteers assisting the 26 member Coalition board. Each task force targets needs within its area and promotes awareness events or action agendas to alleviate specific problem areas. For example, the Business and Industry Task Force together with Glaxo and Blue Cross, Blue Shield, has sponsored two "Babies and Business" conferences, and the Public Awareness Task Force sponsored a Family Fun Day at Pullen Park with free rides, a rap contest and free informational handouts to build public awareness. Area obstetric offices have had inservice training sessions on the supplemental food program WIC, preterm labor prevention and substance use, in initiatives sponsored by the Health Care Professionals Task Force.

The Coalition is young but is receiving increased recognition within the State as a leader in community organization designed to reduce infant mortality. Anyone interested in finding out more about the Coalition or how to organize one in their community can call the Coalition's office at (919) 250-3800.

HIV education

Recently over thirty individuals from all across North Carolina, most of them physicians, participated in a special workshop designed to help them develop strategies for supporting HIV education in their local schools. The workshop, co-sponsored by the NCMS, the AMA and the North Carolina Academy of Family Physicians, was organized by our Sexually Transmitted Diseases and AIDS Committee.

For more information on working with schools regarding HIV education contact Alan McKenzie at (800) 722-1350.

Deceased physicians

Thelma Genevieva Boughton, 90, Hendersonville
Leslie Allen Faudree, 78, Winston-Salem
James Alfred Johnson, 57, High Point
Paul Dorsey Ketchum, 85, Matthews
Frank Baker Marsh, 95, Salisbury
Walter James Molony, 85, Raleigh
William Glenn Myrick, 61, Winston-Salem
Richard Beverly Raney, Sr., 84, Chapel Hill
John Sydney Rodda, 75, Andrews
William Marler Russell, 87, Black Mountain
Earl William Schafer, 76, High Point
Edward Michael Southern, 72, Winston-Salem
Anthony Ronald Spaves, 79, Wilmington
Herbert Lloyd Widener, 49, Charlotte

Correction

We mistakenly reported in the April *Bulletin* that deceased physician James A. Johnson was from Greensboro. In fact Dr. Johnson was a native of High Point and practiced there his entire professional life. We regret the error.

No cause for alarm

Some NCMS members have received letters or calls from insurance agents claiming that the Monarch disability policy endorsed by the North Carolina Medical Society is in financial trouble. This is far from true!

NCMS staff and MMIC staff have been monitoring the financial health of Monarch Life Insurance Company for several months. Recently representatives of the NCMS, the North Carolina Dental Society and MMIC Insurance Services, Inc. met with the President and other top officers of Monarch Life in the Company's home office. Monarch Capital, which owns Monarch Life, is in financial trouble. However, the assets of Monarch Life are protected and guarded by the insurance departments of the states of New York and Massachusetts. Monarch Life Insurance Company is strong financially with more than adequate reserves and surplus to meet the obligations of its policyholders.

These findings were reported in detail to the NCMS Membership Services and Benefits Committee last month. We continue to feel that the Monarch disability policy is the best disability protection at the best price. Because of our endorsement, you may be eligible for discounts of up to 35%. Also, under certain circumstances, you can insure up to 80% of your income. For more information, call MMIC Insurance Services, Inc. Members east of Greensboro call (800) 822-6561; west call (800) 535-5058.

Rehab nominees sought

The Medical Society's Rehabilitation Medicine Committee is seeking nominees for the 1991 NCMS "Rehabilitation Physician of the Year" award. This award is given to a physician who has demonstrated a strong commitment to and advocacy for persons with disabilities. The recipient of the award will automatically be a nominee for the "Health Care Professional of the Year" award given by the Governor's Advocacy Council for Persons with Disabilities.

Following are the guidelines that have been established for nominees.

1) Minimum of 5 years of clinical practice in North Carolina.
2) Significant degree of direct care of persons with physical disabilities.
3) Contributions toward return to employment and advances in improving relations with employers of handicapped persons.
4) Evidence of community service, research or teaching relative to physical disabilities.
5) Supporting reference letters from one physician and two non-physicians.

All nominee applications must be submitted by July 31, 1991, to Sam Pelligra, MD, 1200 N. Elm Street, Greensboro 27401. A recent curriculum vitae should be included with the application.

Nancy Hogshead featured at Sports Medicine

Have you registered yet for the 21st Annual Sports Medicine Symposium? You'd best hurry because the July 5-7 conference at Wrightsville Beach is rapidly approaching. The Medical Aspects of Sports Committee has put together an outstanding program and a good turnout is expected.

Featured as a speaker at the symposium will be Olympic swimmer Nancy Hogshead. Nancy is an asthmatic and will reflect on how she dealt with her condition through her training and competition.

The rest of the program is outstanding as well and one you're sure to find worthwhile. If you have misplaced your registration material or have any questions, call Alan Skipper at NCMs headquarters at (800) 722-1350.

See you at the beach!

Briefly noted

Hugh H. Tilson, MD, Director of Epidemiology, Surveillance and Pharmacoeconomics at Burroughs Wellcome Co., is the 1991 recipient of the American College of Preventive Medicine's (ACPM) Distinguished Service Award. The award, which recognizes outstanding service to the ACPM, was presented to Dr. Tilson recently at a meeting in Baltimore.

A graduate of the Washington University School of Medicine in 1964 and the Harvard School of Public Health in 1969, he is board certified in general preventive medicine. Prior to joining Burroughs Wellcome Co., Dr. Tilson served as director of the Division of Health Services for the State of North Carolina.

Getting fit

In this month's *Bulletin* you will find a sample brochure entitled "Physical Fitness for You and Your Family." The brochures are available from the North Carolina Governor's Council on Physical Fitness and Health and can be used to encourage your patients to take an important step to protect or improve their health.

The Governor's Council promotes positive lifestyles through improved physical fitness. They are the lead agency for achieving the Year 2000 Health Objectives pertaining to physical activity for North Carolina. The Council organizes such programs as National Employee Health and Fitness Day, the annual Governor's Fitness Awards Luncheon and local councils on physical fitness in each county. For more information on the Governor's Council or for additional physical fitness brochures please call (919) 733-9615 or complete and mail the coupon below to: North Carolina Governor's Council on Physical Fitness and Health, PO Box 27687, Raleigh, NC 27611-7687.

Name _____

Address _____

City _____ State _____ Zip _____

Phone _(____)_____ Number of brochures requested _____

Calendar...

June 20-23 **North Carolina Society of Internal Medicine Annual Meeting** at the Blockade Runner Hotel at Wrightsville Beach. Contact William Hilliard at (919) 787-5859.

June 23-27 **American Medical Association Annual Meeting** at the Chicago Hilton & Towers Hotel, Chicago, Illinois. Contact Alan Skipper at (800) 722-1350.

July 1-6 **Mid-Summer Family Practice Digest** at the Kingston Plantation/ Radisson Resort Hotel, Myrtle Beach, SC. Contact Sue Makey at (800) 872-9482.

July 5-7 **21st Annual Sports Medicine Symposium** at Wrightsville Beach. Contact Alan Skipper at (800) 722-1350.

July 12-14 **North Carolina Chapter, American College of Surgeons Annual Meeting** at the Grove Park Inn in Asheville. Contact Carol Russell at (800) 722-1350.

July 21-25 **Thirty-Seventh Annual Southern OB-GYN Seminar, Inc.** at the Grove Park Inn in Asheville. Contact Otis Duck, MD, Treasurer, at (704) 689-2411.

September 6-8 **North Carolina Pediatric Society Annual Meeting** at the Grove Park Inn in Asheville. Contact Carol Russell at (800) 722-1350.

September 11 **13th Annual Health Law Forum, "Physician Accountability: Legalistic Overkill?"** at the Ramada Inn, Greenville. Contact Edward E. Hollowell, JD, at (919) 783-5657.

September 19-21 **North Carolina Orthopaedic Association Annual Meeting** at the Blockade Runner at Wrightsville Beach. Contact Carol Russell (800) 722-1350.

November 5-10 **North Carolina Medical Society's 137th Annual Meeting** at the Grove Park Inn, Asheville. Contact Alan Skipper at (800) 722-1350.

November 10 **NCMS Gearing Up for Retirement Seminar** at the Grove Park Inn in Asheville. Contact Alan McKenzie at (800) 722-1350.

September 1991

bulletin

NORTH CAROLINA MEDICAL SOCIETY

Autumn, Asheville, Annual Meeting

Westward-Ho will be the cry in November for those headed to the Medical Society's 137th Annual Meeting. That is, of course, if you live east of Asheville, which is the site of this year's event. November 6-10 are the dates and the Grove Park Inn will provide the accommodations. In addition to the normal business activities of section meetings, reference committees and House of Delegates sessions, the meeting will have many recreational opportunities for those who attend including golf, tennis and tours.

Some new features at this year's meeting include: continental breakfasts on Thursday and Friday mornings in the Exhibit Hall, and lunch and a cash bar reception Thursday afternoon in the same locale. Also new this year is the European Room Rate Plan. This Plan **does not** include meals as part of the accommodations.

Registration for the meeting must be sent to the North Carolina Medical Society, PO Box 27167, Raleigh, NC 27611 before October 11th, and reservations for the Grove Park Inn need to be sent to them by October 5th. Registration packets were sent out with last month's *Bulletin*— if you didn't receive a packet or have misplaced it call Kelly Fry at (800) 722-1350. The Annual Meeting program is being sent **only** to members who register to attend.

Activity package

This year's Annual Meeting will include several activities for the enjoyment of meeting attendees and their families. Biltmore Estate tours and Mountain Craft tours are scheduled on Thursday and Friday afternoons, November 7 and 8. Golf and tennis tournaments will also be held on Friday afternoon.

Saturday evening, November 9, will feature a Mountain Fling at Taylor Ranch which promises to be fun for all. Be sure to register early to beat the deadline.

USAir to Asheville

For those planning to fly to Annual Meeting, a discount airfare package has been arranged with USAir. To make your flight reservations, call (800) 334-8644 and be sure to refer to GOLD FILE # 5304000. Your travel agent can also make your reservations for you by mentioning this number. Roundtrip ground transportation will be available in Asheville as well. Information on making ground transportation reservations can be found in the registration packet.

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DNR update .....page 11

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LIBRARY-SERIALS DEPT., BOX 0849
530 PARNASSUS AVENUE
SAN FRANCISCO, CA 94143

A supplement to the *North Carolina Medical Journal.*

New physicians sign on

The NCMS has just completed its second successful "New Eligibles" recruitment campaign. This campaign is targeted toward physicians who have been licensed in North Carolina within the past 12 months. In 1990 this campaign yielded 32 new members. This year 36 new members were recruited.

The 1991 campaign began in March and ended August 1. Dr. Larry Nickens of Goldsboro successfully recruited three new members to win the first place award—an expense paid resort weekend for two. Eight physicians tied for second place by recruiting two new members each. Awards will be presented during the NCMS Annual Meeting at the Grove Park Inn, in Asheville, November 6-10.

We wish to thank all of those members who participated in this letter-writing campaign. We look forward to another successful campaign beginning in the spring of 1992.

Second place finishers

George Wolff, Greensboro
Charles Hoffman, Fayetteville
Richard Liles, Albemarle
Charles Herring, Kinston
Jess Powell, III, Shelby
Eugene Mayer, Chapel Hill
Reggie Harris, Shelby
John W. Foust, Charlotte

Recruited one new member

John Fagg, Winston-Salem
Edwin Monroe, Winston-Salem
Carl D. Pate, Beulaville
Don Chaplin, Burlington
Harvey Estes, Durham
Carolyn Ferree, Winston-Salem
Mac Mauney, Asheville
Gray Hall, Dobson
Elizabeth Kanof, Raleigh
Richard Bruch, Durham
John Haverkamp, Goldsboro
James Weaver, Durham
Ed Garrabrant, Raleigh
Larry Lutz, Lenoir
Carl Biggers, Asheville
H. David Bruton, Southern Pines
Philip H. Pearce, Durham

Welcome new members

Michael L. Adler, Winston-Salem
Mark E. Anderson, Greensboro
Barbara L. Appel, Fayetteville
Kenneth J. Baker, Monroe
David J. Batluck, Whiteville
Clarence H. Beavers, Eden
Michael S. Bryant, Fayetteville
Joel P. Carroll, Durham
Barbara A. Clifford, Winston-Salem
Karen L. Cloninger, Gastonia
Marilu M. Cook, Goldsboro
Jonathan M. Cox, Greenville
Andrew M. Dale, Winston-Salem
Laurence D. Frederick, III, Goldsboro
Arthur M. Freeman, III, Asheville
Gary Glenn Gammon, Gastonia
Adam O. Goldstein, Chapel Hill
James R. Hughes, Rocky Mount
Jeffry Lee Kashuk, Mocksville
Randy O. Kritzer, Greensboro
Gary G. Leonhardt, Greenville
Deborah L. Lewis, Raleigh
William James Mallon, Durham
Daniel L. McClellan, Gastonia
Laurence G. Miles, Rocky Mount
Claiborne L. Moseley, II, Sanford
Paul L. Mulhausen, Hillsborough
George C. Pantelakos, Fayetteville
John E. Spence, Charlotte
James R. Stevens, Raleigh
Thomas M. Stubbs, Charlotte
Jan Bishop, Lenoir
Douglas E. Trent, Gastonia
Sharon E. VanHorn, Chapel Hill
John E. VanWye, Asheville
Thomas E. Weed, Wadesboro

bulletin
NORTH CAROLINA MEDICAL SOCIETY
Published monthly by the North Carolina Medical Society as a supplement to the *North Carolina Medical Journal*. Reader comments and suggestions are welcome and should be directed to Bob Burns, Editor, *Bulletin*, North Carolina Medical Society, PO Box 27167, Raleigh, NC 27611, (800) 722-1350, FAX (919) 833-2023.

Penalties set by feds

Under the law establishing the National Practitioner Data Bank (NPDB), information to be reported included payments made by an insurance company, self-insurance or an HMO in satisfaction of a medical malpractice claim against a physician or other healthcare provider. The reporting mandate is enforced by the Office of Inspector General through recently published regulations that call for civil money penalties.

A penalty of up to $10,000 may be issued against a person or entity that fails to report the required information to the NPDB. A penalty of up to $10,000 can also be imposed against any person or entity that violates the confidentiality of the information reported or disclosed under the federal statute. For example, state licensing board employees, employees of healthcare entities, including HMOs, or other persons, entities or organizations that have access to confidential NPDB information can be sanctioned under these regulations. If more than one party was responsible for disclosing confidential information, a penalty could be imposed against each responsible individual or organization.

Any release of information reported to the NPDB in response to a subpoena or discovery request is considered a violation of these confidentiality provisions. For example, if a hospital receives a subpoena for a report it furnished or received from the Data Bank, it cannot release these reports since this would constitute an improper disclosure and subject the hospital and its employees to civil money penalties. The confidentiality statements do not, however, apply to an entity's or person's original documents or underlying records from which information was obtained that was thereafter reported to the NPDB.

These regulations went into effect on June 21, 1991. If you require additional information contact the Medical Society's General Counsel at (800) 722-1350.

RBRVS seminars

The North Carolina Medical Society will sponsor a series of regional seminars to help you and your staff prepare for upcoming changes in the Medicare reimbursement system. Participants will hear the latest information available on Medicare payment reform and RBRVS, including the actual Relative Value Units, the conversion factor and other payment policy changes which are scheduled to be published by HCFA by the end of October.

Arrangements are still being made for the seminars to be held from 11:30am to 3:00pm as follows:

November 18 (New Bern area)
November 19 (Triad area)
November 20 (Triangle area)
November 21 (Hickory area)

To register, or for more information, contact Aileen Best at (800) 722-1350.

Anti-hassle
Part II

On June 19, Representative J. Roy Rowland (D-GA) and Senator Max Baucus (D-MT) introduced legislation (H.R. 2695/ S. 1332) to cut back further on the administrative "hassles" involved in treating Medicare patients. The legislation, entitled **Medicare physician regulatory relief amendments of 1991**, is a continuation of legislation enacted last year that reduced the hassle factor for physicians in significant ways. This current legislation goes even further and is intended to address problems in the following areas:

•**Medicare Secondary Payor:** would prohibit the Health Care Financing Administration (HCFA) from denying physician payments for medically necessary covered services if patients fail to complete questionnaires.

•**Extrapolation:** would allow HCFA to continue to sample cases and generalize to a physician's entire Medicare practice, but give physicians the option of requiring carriers to produce evidence of each specific payment error. No refund, offset assessment, penalty or interest will accrue until the administrative appeal process has been completed.

•**Carrier Use Fees:** would prohibit HFCA from charging physicians for 1) filing paper claims; 2) claim filing errors or claims that are rejected; 3) the costs of unsuccessful appeals; 4) applications for unique provider identification numbers; and 5) medical review requirements.

•**Annual Carrier Evaluations:** would require the Secretary of Health and Human Services to promulgate regulations that establish standards for input from state medical societies into the annual performance evaluations of the carriers. The bills would also require HCFA to revise its current evaluation measures to include items that better reflect efforts to minimize the hassle factor.

•**Medicare Carrier Accountability:** allow individuals to file administrative appeals when the carrier has failed to implement or has improperly implemented Medicare policy. To be eligible for such an appeal, the individual would present evidence of at least $500 in damages as a result of the breach of policy. Individuals would be permitted to aggregate similar cases to meet the $500 threshold.

•**Physician Peer Review:** would require that all medical necessity denials under the Medicare program be reviewed by appropriately licensed physicians of the same specialty or subspecialty as the physician providing the service. The identity of the physician reviewer would be revealed to the physician filing an appeal prior to a hearing on the denial.

Please contact your members of Congress and ask them to support this important legislation. You may call your representative or senator at (202) 224-3121. Be sure to ask for them by name and state. To write, use the following addresses:

Senate

The Honorable_____
United States Senate
Washington, DC 20510

House

The Honorable_____
U.S. House of Representatives
Washington, DC 20515

Literacy and medications

The Burroughs Wellcome Company has given $10,000 to the state's Division of Adult Health to begin an innovative project to help people with low literacy skills better understand their medications and comply with their prescriptions.

Patients with low literacy skills face many obstacles and health risks when it comes to using medications. This is an important concern for North Carolina because an estimated 20 percent of the state's population is considered marginally literate. State pharmacy groups have long been interested in the relationship between low literacy and the misuse of medicines.

To address this issue the Division of Adult Health, the Board of Pharmacy and the North Carolina Pharmaceutical Association have formed a statewide literacy consortium. Participants include the North Carolina Medical Society, Literacy South, the Governor's Council on Literacy, the University of North Carolina School of Medicine, Burroughs Wellcome Company and Glaxo, Inc.

The consortium is co-chaired by Marjorie Allan, MD, a volunteer with the Division of Adult Health; and David Work, JD, Executive Director of the North Carolina Board of Pharmacy. Conducting the study will be Dr. Hanna Fingeret, Executive Director of Literacy South and an internationally-known expert on adult literacy.

The first phase of the project will be to identify the needs, problem areas and appropriate approaches to providing medication information to patients with low literacy skills. To achieve these goals, the project's staff has adopted the unique approach of involving marginally literate participants to help assess needs and develop ways to address them.

Results of this initial work should be available in November.

Individuals wishing to learn more about the consortium's work or groups interested in participating should contact David Work at (919) 942-4454 or Barbara Fleming, MD, PhD, Division of Adult Health at (919) 733-7081.



Pictured at the presentation of the Burroughs Wellcome grant are George Moore, NCMS Executive Vice President; Al Mebane, NC Pharmaceutical Association; Marjorie Allan, MD, Division of Adult Health; Joe Whitehead, Burroughs Wellcome; and David Work, JD, Board of Pharmacy.

Focus: Elderly and drugs

October is "Talk About Prescriptions Month" and the Drug Abuse & Pharmacy Committee is again coordinating the Medical Society's medication safety educational campaign. This year, the Aging Committee is bringing its expertise to the campaign with special focus on medication problems among the elderly.

As in past years, the committee will distribute newspaper press releases and a series of scripts for weekly radio public service announcements. Members of the Drug Abuse & Pharmacy Committee and Aging Committee are also prepared to participate in newspaper and on-air radio and TV interviews. Last year the Medical Society responded to nearly thirty requests from the media. Special posters will also be sent to pharmacies and aging centers throughout the state encouraging patients to take their medicines "in for a check-up."

In addition to the media releases and speakers bureau components of the campaign, these committees hope to enlist your assistance in this educational effort. Stickers and other promotional materials designed to remind your patients to ask questions about their prescriptions will be sent out in September. You are encouraged to wear one of these stickers whenever you are seeing patients and to pass them out to other staff in your office, as appropriate. Also, during October, the committees hope you will begin spending a little extra time talking to your patients about their prescriptions and over-the-counter medicines.

The Drug Abuse & Pharmacy and Aging Committees encourage you to emphasize the following points when prescribing medicines for your patients:

- give the name of the medicine or procedure prescribed and a description of what it is supposed to accomplish;
- tell your patients how often to take the prescription and for how long. Merely writing BID, TID, q 6 hours, or q 8 hours is insufficient for many patients. It is safer and more efficient to write on the prescription the exact times that the medication is to be taken. For many patients TID means 8am, 9am and 10pm or some variant of this;
- tell your patients what foods, beverages or other medicines to avoid while taking the prescription, including over-the-counter medications, medicines from other healthcare professionals (including dentists and other non-physicians) and home remedies;
- inform your patients of common side effects and what to do if they occur;
- provide written materials concerning the drug prescribed;
- encourage your patients to bring all current medicines to each office visit so that these drugs can be discussed and possibly discarded; and

- ask your patients whether the prescription can be purchased on the day it is written.

Also, make sure your patients understand that they are responsible for:

- following the instructions on the prescription exactly as written;
- purchasing the prescription the day it is written or informing you if this will not be possible (you may want to consider other options);
- carrying medications in properly labeled containers, i.e., not putting medicines together in one container, envelope, clothing pocket or purse (to prevent accidentally taking the wrong medicine, etc.);
- asking you or the pharmacist questions about the prescription if doubt arises as to its purpose, dose, times to be taken, side effects, etc.;
- not giving their prescription medicine to any person, without specific medical advice;
- informing you if they are pregnant, a smoker or heavy drinker;
- if a dose of medicine is forgotten, not taking twice as much at the next dosage time without specific medical advice; and
- bringing all current medications, including home remedies, over-the-counter drugs, and medications prescribed by other healthcare providers, such as dentists, to each medical encounter (i.e., medical encounters with personal physicians, specialists, emergency rooms).

For more information on the Medical Society's medicine safety campaign, contact Alan McKenzie at (800)722-1350.

Medical records

An excellent publication entitled "Access to Medical Records: A Guide to Patients' Rights" has been published by the Institute of Government, the University of North Carolina at Chapel Hill. It reviews the rights of consumers to their medical records, the ethical opinions of the AMA and the laws of other states to anticipate how healthcare providers might respond to requests for medical records. For a copy of the publication (costing $4.50 plus 6% sales tax), contact the Publications Office, Institute of Government, CB #3330, Knapp Building, UNC at Chapel Hill, Chapel Hill, NC 27599-3330. The phone number is (919) 966-4119. For additional information, please contact NCMS General Counsel at (800) 722-1350.

President's message



Edwin W. Monroe

Edwin W. Monroe, MD
President

You have proven once again that physicians can be effective in influencing government policy, especially when they unite and speak with righteous, forceful voices. We asked you to respond and you did. In July we issued a call to action regarding the newly published Medicare regulations. As we told you, these regulations were supposed to be budget neutral but instead reflected a 16% reduction in the conversion factor used to calculate your payment when you care for elderly or disabled patients. This is a breach of faith by HCFA with medicine and with Congress.

We asked you to write your senators and congressmen, educate your patients and contact HCFA directly with your concerns. Staff at the Society's headquarters have told me that they have been receiving copies of your letters and your congressmen are listening because responses are coming in daily. All of them note concern and express their commitment to work on a solution.

Your colleagues across the nation have also been busy contacting their representatives, and this massive reaction by the medical and lay community has gotten everyone's attention. So far over 150 representatives and senators have signed letters objecting to the 16% proposal. Powerful committees such as the House Ways and Means Committee and the Senate Finance Committee are questioning HCFA's interpretations of the law and the assumptions they used to establish the proposed pay schedule. This negative reaction by Congress has not gone unnoticed by HCFA's chief administrator Gail Wilensky. She recently indicated that her agency is rethinking its position on how the budget neutrality adjustments must be applied (another way of saying we goofed-we'll come back with something else).

This demonstrates to me once again the influence of organized medicine when it goes into action with purpose and unity. There are many issues calling for action and involvement by medicine. One of great importance is the repeal of Medicare's discriminatory payment policies for medical services provided by new physicians. Currently there is a bill before the US House of Representatives (H.R. 1898) that will correct this injustice. The current policy not only discriminates against young physicians but compounds the problem of access to health care in many underserved areas by influencing specialty and practice location choices by young physicians. As with the payment reform issue, if we band together and contact our representatives we can get something done. I urge you to contact your senators and congressmen and asked that they support H.B. 1898. Our young physicians need our support.

Recently one of our members wrote to me to express his discouragement about being heard in Washington or Raleigh if he called or wrote his duly elected representatives. I can understand his frustration but

(See President page 9)

Better ways to pay your dues

For the past two years the NCMS has offered members the option of paying dues in two equal semiannual payments. The first installment payment is accepted through December 31st, and the second installment is due by March 31st.

This fall, for the first time, NCMS members may pay their annual dues (whether they choose to pay semiannually or in one payment) by MasterCard or VISA. There will be a space on the 1992 invoice for indicating your card number and signing so that the NCMS can charge your dues payment.

Also new in the 1992 dues year is the use of a "Lock Box" service provided at First Union National Bank in Charlotte. Your dues will be received at FUNB-Charlotte and immediately deposited to allow the NCMS to invest the funds more efficiently.

Please use the envelope provided with your dues invoice to remit your dues to the bank in Charlotte. Should you have questions about any of these changes in the 1992 dues payment process, please call NCMS membership staff at (800) 722-1350.

President

(Continued from page 8)

I disagree strongly with his decision to remain silent. True, one small lonely voice may not make much difference but a harmonious chorus of thousands cannot be ignored.

There are many more issues where our influence and muscle can be felt—one of which is discussed on page 4 of this issue of the *Bulletin*. When we have shown solidarity and common purpose we have had tremendous success. I thank you for your previous involvement and urge you to keep at it—we *do* make a difference.

Briefly noted

George Johnson, Jr, MD, has received the 1991 Distinguished Faculty Award from the alumni association of the School of Medicine at the University of North Carolina at Chapel Hill. The award recognizes excellence in teaching, contributions to medicine, leadership in physician continuing education and efforts to improve communications among alumni, faculty and North Carolina residents. A native of Wilmington, Dr. Johnson is Vice-Chairman of the Department of Surgery at UNC and is Chairman of the NCMS Traffic Safety Committee.

NCMS goes for the gold

The North Carolina Medical Society Executive Council, responding to the recommendation of our Membership Services & Benefits Committee, is changing the sponsorship of its credit card from Maryland Bank, N.A., to North Carolina's BB&T. Founded in 1872, BB&T is the oldest bank in continuous operation in the state. It is the fourth largest bank in North Carolina and one of the 100 largest banks in the country.

Your new Gold MasterCard is being offered through a special agreement between BB&T and the North Carolina Medical Society. The new card bears the Medical Society name and logo, thereby distinguishing you as a physician each time you use it. In addition to the value of endorsing an in-state program, the NCMS/BB&T Card offers other benefits not offered through most other cards available in the market.

The low $15 annual fee will be waived for the first year and, depending on your outstanding balance, your interest rate will be as low as prime rate plus 1 percent. Your interest rate will never be higher than prime plus 5 percent. Other Gold MasterCards charge annual fees of $40 or more and higher interest rates. Also, there are no fees for cash advances, late payments or over-the-limit purchases.

Other major benefits include the MasterAssist Family of Services, the MasterPurchase program and $500,000 in common carrier insurance. Also, when you make your travel reservations through BB&T's Traveler's Edge, you'll receive a travel cash bonus of 3 to 5 percent.

A brochure describing the new program, including an application for the Card, is enclosed with this issue of the *Bulletin*. For more information, contact the North Carolina Medical Society or call the BB&T Customer Assistance Center toll-free at (800) 476-4228.

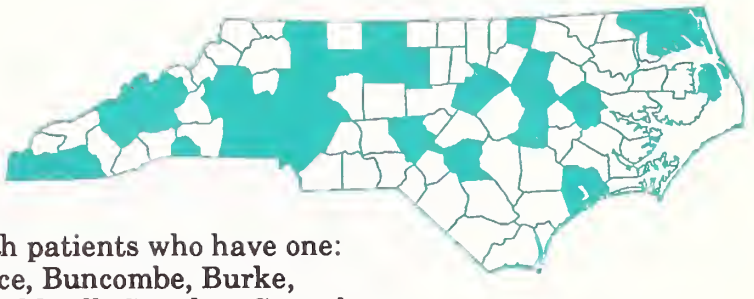
NC one of ten

To assist HCFA in determining whether it is cost effective to provide annual influenza immunizations to Medicare Part B beneficiaries, North Carolina has joined nine other states as a participant in a demonstration project.

Eighteen counties are involved in the project. These counties are: Alexander, Burke, Caldwell, Catawba, Cleveland, Durham, Edgecombe, Franklin, Gaston, Johnston, Lee, Lincoln, Mecklenburg, Nash, Orange, Union, Wake and Wilson. Medicare Part B beneficiaries in these counties will receive the flu vaccine free of charge.

The project is administered by the Division of Epidemiology of the North Carolina Department of Environment, Health, and Natural Resources. Outreach materials designed to make people aware of the project are available from Barbara Laymon, Project Supervisor. She can be reached at (919) 733-8368.

DNR reaches 40%



Six more North Carolina counties have endorsed the out-of-hospital do not resuscitate order form in the past month, bringing to forty the number of counties in which EMTs have declared their willingness to honor it when they find it by the bedside of a patient dying at home. The form, which was developed by a multidisciplinary group sponsored by the NCMS Bioethics Committee, permits a dying patient to die in peace even if family members should unwittingly dial 911 for assistance at the moment of death.

Several county EMS systems — including Guilford and Iredell — had their own DNR system in place and have decided to switch to the NCMS form in order to permit uniformity across the state. The EMTs in the following 40 counties have endorsed the form and developed policies and procedures to be followed with patients who have one:

Alamance, Buncombe, Burke, Cabarrus, Caldwell, Camden, Catawba, Cherokee, Clay, Cleveland, Cumberland, Currituck, Dare, Davie, Forsyth, Gaston, Gates, Guilford, Haywood, Iredell, Lincoln, Macon, Madison, Mecklenburg, Moore, Nash, Onslow, Pasquotank, Perquimans, Pitt, Polk, Rockingham, Rowan, Surry, Wake, Warren, Wayne, Wilson, Yadkin and Yancey.

Physicians, nursing homes, hospices and home health agencies in the 40 counties have been notified that they may take advantage of the Attorney General's new opinion. Physicians may write the Medical Society and request 25 copies for their own use or for a nursing home, hospice or home health agency with which they are affiliated.

Teens and tobacco

On Wednesday, July 31, 28 Raleigh teenagers (ages 12-15) reported to the media how they were easily able to purchase cigarettes despite its being against the law. These teenagers were part of the "Tobacco-Free Youth Project" sponsored by Commit to a Healthier Raleigh, a four-year community campaign to help people stop smoking.

The overall results were startling. These minors were able to purchase cigarettes from approximately 2 out of 3 stores (66 of 103 attempts) and 27 of 29 vending machines. The current legal age to purchase cigarettes in North Carolina is 17, which the North Carolina Legislature just raised to 18, effective October 1.

A community-wide education campaign aimed at merchants, teens and the public is being implemented. The campaign has as its overall goal to increase merchant awareness of and voluntary compliance with the law and to discourage teens from smoking. Anyone interested in finding out more about Commit or the teenage program can call the Commit offices at (919) 821-4222.

Calendar...

September 19 **Improved Collection Practices in the Healthcare Office** at the Embassy Suites in Charlotte. Contact Aileen Best (800) 722-1350.

September 19-21 **North Carolina Orthopaedic Association Annual Meeting** at the Blockade Runner at Wrightsville Beach. Contact Carol Russell (800) 722-1350.

September 24 **Improved Collection Practices in the Healthcare Office** at the Holiday Inn Airport in Research Triangle Park. Contact Aileen Best (800) 722-1350.

September 25 **Improved Collection Practices in the Healthcare Office** at the Embassy Suites Hotel in Greensboro. Contact Aileen Best (800) 722-1350.

September 26 **Improved Collection Practices in the Healthcare Office** at the Radisson Hotel in Asheville. Contact Aileen Best (800) 722-1350.

September 26-27 **HIV/AIDS Mini-Clinical Tutorial,** at the ECU School of Medicine, Infectious Diseases Section. Contact ECU, Office of CME at (919) 551-5208.

September 30 **Distinguished Family Medicine Lecture, "Physician Payment Reform"** William C. Hsiao, PhD, chief architect of RBRVS, will be speaking from 12:30pm to 1:30pm at the Brodie Building, ECU School of Medicine. All welcome.

October 10 **Communicating and Evaluating Hazardous Exposure in the Clinical Setting** at the Area Health Education Center offices in Charlotte. Contact Cherylle Beal at (919) 733-4984.

October 17 **Communicating and Evaluating Hazardous Exposure in the Clinical Setting** at the Area Health Education Center offices in Greenville. Contact Cherylle Beal at (919) 733-4984.

November 6-10 **North Carolina Medical Society's 137th Annual Meeting** at the Grove Park Inn, Asheville. Contact Alan Skipper at (800) 722-1350.

November 7 **Health Cost Management for NC Employers—Strategies for the 90s** at the Omni Hotel in Chapel Hill. Contact Kathy Higgins or David Abernathy at (919) 490-4104 or (919) 490-4264.

Journals
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October 1991

Bulletin

ICAL SOCIETY

North Carolina Medical
Journal
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Medicine check-up campaign

•A 70-year-old woman with a new prescription medicine reports feeling depressed and disoriented—side effects not usually associated with the medication.

•An examination shows that a construction worker's previously well-controlled arrhythmia is no longer responding to treatment.

•A low dose of a barbiturate unexpectedly causes a young mother to lose consciousness.

Although these medical problems are very different, one diagnostic tool can explain - and could have prevented - each of them: the medicine review. This is where patients bring all their prescription and nonprescription medicines to their physician. The physician examines the medicines and talks with the patient to assess the potential for adverse interactions or reactions and the patient's understanding of and compliance with instructions for use.



During October, the Medical Society's Drug Abuse and Pharmacy and Aging Committees are orchestrating the Medical Society's involvement with National "Talk About Prescriptions" Month. Special "Medication Check-Up" kits have already been sent to all primary care physician members of the Medical Society. Each kit contains a supply of patient brochures, special bags for patients to put their medicines in, stickers for physicians and their staffs to wear to encourage patients to bring their medicines in for a "check-up," and posters promoting the educational campaign. Similar materials have

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A supplement to the *North Carolina Medical Journal.*

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94143

Campaign

(Continued from page 1)



George E. Moore, NCMS Foundation Executive Vice-President (right), accepts a $15,000 contribution from Burroughs Wellcome representative, Dennis M. Vick, to support the Medical Society "Bring Your Medicines in for a Check-up" patient educational project.

been distributed to senior centers throughout North Carolina. Burroughs Wellcome Co. is helping underwrite this year's campaign through a grant to the NCMS Foundation.

Some problems to check for

The Drug Abuse and Pharmacy and Aging Committees hope that this campaign will encourage primary care physicians to begin performing medicine reviews routinely, especially for elderly patients. Medicines collected from patients should be reviewed for the following common problems:

Duplication of medicines

Many patients will be taking the same product under more than one name. This may be a result of multiple prescribers and pharmacists or the patient's own drug selections.

Contraindications and drug interactions

These problems are frequently the most serious that you will encounter. It is important to assess the possibility of adverse results by reviewing the patient's medicine allergies, reported side-effects and the potential for interaction among all prescribed and over-the-counter medicines taken by a patient.

Drugs that sound alike

When patients are taking multiple medicines, it is easy for them to mix up names of products. This can cause a variety of problems, from following the wrong set of instructions to not taking some medicines at all.

Use change

Some discrepancies between a patient's account of medicine use and instructions that appear on the medicine container may result from a healthcare professional verbally changing a regimen or a pharmacy failing to change the refill's label.

Improper administration; over- or under-utilization

These problems are often due to inadequate patient understanding of instruc-

(See Campaign page 3)

bulletin
NORTH CAROLINA MEDICAL SOCIETY

Published monthly by the North Carolina Medical Society as a supplement to the *North Carolina Medical Journal*. Reader comments and suggestions are welcome and should be directed to Bob Burns, Editor, *Bulletin*, North Carolina Medical Society, PO Box 27167, Raleigh, NC 27611, (800) 722-1350, FAX (919) 833-2023.

Hospital on wheels

In 1980 the North Carolina Medical Society Foundation purchased a hospital railcar (USA 89480) and donated it to the state of North Carolina for use at Spencer Shops, the state's transportation museum in Spencer. The car was one of 200 built betweeen1944 and 1945 for the purpose of transporting war casualties from seaports to military hospitals throughout the United States.

The Spencer Shops, along with volunteers, are now planning a major restoration of USA 89480. The cost of the project is estimated to be around $21,000. We would like to encourage Society members to make a tax-deductible contribution to help preserve this part of medical history. Donations can be sent to the North Carolina Transportation History Corporation (THC) at Spencer Shops, PO Box 165, Spencer, NC 28159.

The THC is seeking details from anyone who has information on hospital cars, rode on one or recalls seeing one in use. If so, contact the Spencer Shops at the above address.

Campaign

(Continued from page 2)

tions for use. You should also probe for "intentional non-compliance" in which the patient chooses not to follow directions as given. This will allow you to help the patient overcome barriers to proper use. If the patient has achieved better results by altering the dosage or regimen, consider changing the prescription directions.

Expired medicines

Patients who don't complete a course of therapy frequently keep the remainder "for the next time"; others who have a prescription for occasional use may not empty a container even after several years. A patient may also keep a prescription that has not expired but that has been discontinued.

In addition to the Medical Society's program, the North Carolina Pharmaceutical Association has organized an educational campaign for October. During this campaign, pharmacists will be conducting medicine reviews with patients. You may receive calls from pharmacists wanting to discuss problems identified during these reviews. Similarly, if you identify problems you may want to notify the patient's pharmacist.

If you are not a primary care physician but would like to receive a free "medication check-up" kit, contact Aileen Best at (800) 722-1350. Members may also contact the National Council on Patient Information and Education at (202) 347-6711 to discuss participation in "Talk About Prescriptions" Month.

Annual Meeting

We are going to be in Asheville November 6th through the 10th and we want you to be there, too. Take a look at the following schedule of events and make your plans to attend today.

Wednesday, November 6, 1991

2:00pm	Mediation Committee
	Cancer Committee
3:00pm	Equicor Physician Payment Reform Update
5:00pm	Delegate/Alternate Delegate Orientation
6:30pm	Exhibitors' Reception

Thursday, November 7, 1991

7:00am	AMA Delegation Breakfast
8:00am	Continental Breakfast (Visit Exhibits)
	Exhibits
8:30am	House of Delegates
9:00am	NC Commission for Health Services
12:00N	Nominating Committee
	Lunch (Visit Exhibits)
pm	Tours/Recreation
2:00pm	Reference Committees
	PHEP Board of Directors
	NCSIM/Medicare
4:30pm	Cash Bar Reception (Visit Exhibits)
5:30pm	Alumni Receptions
6:30pm	Past Presidents Dinner
8:30pm	President's Dance

Friday, November 8, 1991

7:30am	Legislation Committee Breakfast
8:00am	Continental Breakfast (Visit Exhibits)
	Exhibits
8:30am	Internal Medicine Section
	Surgery Section
	Allergy & Clinical Immunology Section
	Public Health & Education Section
	Hospital Medical Staffs Section
	Medical Students Section
	Emergency Medicine Section
	Urology Section
	Pediatrics Section
	Ophthalmology Section
	Obstetrics & Gynecology Section
11:30am	RBRVS Update
	Ophthalmology Section Lunch
pm	Tours/Recreation
12:45pm	Golf Tournament
1:30pm	Tennis Tournament
1:30pm	NCSIM Executive Committee
2:00pm	NC Pediatric Society Executive Committee
	NC Ob/Gyn Society Executive Committee
6:00pm	NCSIM Reception
	NC,ACR Reception
7:00pm	Reception
8:00pm	President's Dinner
9:00pm	NC,ACR Executive Committee

Saturday, November 9, 1991

7:00am Young Physicians Section Breakfast
Component Medical Society Breakfasts
Primary Care Coalition Caucus
8:00am Young Physicians Section
8:30am Radiology Section/NC,ACR
Neurological Surgery Section
Neurology Section
Psychiatry Section
Family Practice Section
Pathology Section
Resident Physicians Section
Otolaryngology & Maxillofacial Surgery Section
Plastic & Reconstructive Surgery Section
Dermatology Section
10:30am House of Delegates
12:30pm MEDPAC Lunch
Anesthesiology Section Lunch
1:00pm Dermatology Section Lunch
2:00pm House of Delegates
6:30pm NC,ACR Reception
"Saturday Night Fling" at Taylor Ranch
7:30pm NC,ACR Dinner

Special RBRVS update

11:30am - 12:30pm
Friday
Laurel F & G Room
Sammons Wing
Speaker - Barry Eisenberg
Director - Health Programs AMA

Sunday, November 10, 1991

8:30am Retirement Planning Workshop
Radiology Section/NC,ACR

House of Delegates

Grand Ballroom C

First Session
Thursday Morning

Keynote Speaker:
Daniel H. Johnson, Jr, MD
Speaker, AMA House of Delegates

Second Session
Saturday Morning & Afternoon

Exhibits

Grand Ballroom A & B

Continental Breakfast
Thursday and Friday

Lunch
Thursday

Cash Bar Reception
Thursday Afternoon

Safe harbor regulations have docked

The long awaited safe harbor regulations are here. You may recall that these regulations are the result of the Medicare anti-kickback statute passed by Congress two years ago. Effective July 29, 1991, these regulations identify various payment practices which, although potentially capable of inducing referrals of business under Medicare or a state healthcare program, will be protected from criminal prosecution or civil sanctions.

Briefly, it is not illegal to receive payment or other benefits for the following business arrangements:

Investment interests

You may receive a return on investment interest if the entity in which you invest possesses more than fifty million dollars in undepreciated net tangible assets; and no more than 40% of the investors can be in a position to make or influence referrals, and no more than 40% of revenues can come from investor referrals.

Space rental or equipment rental

You may lease building/office space or rent equipment as long as: the agreement is in writing and signed by everyone involved; the agreement specifies the building/office space or equipment covered; the agreement is intended to provide you with access to the building/office space or use of the equipment for periodic intervals of time, and the lease specifies the schedule of intervals; the term of the agreement is for not less than one year; and the aggregate lease or rental charges set in advance are consistent with the fair market value.

Personal services and management contracts

You may pay agents for their services as long as the agency agreements are in writing and signed by all parties involved; they specify the services to be provided; they provide for services on a periodic or part-time basis; they specify the time interval, their precise length and the exact charge for each; they are for not less than one year; the aggregate compensation paid to agents over the term of the agreement is set in advance, is consistent with the fair market value and is not determined in a manner that takes into account the volume or value of any referrals or business otherwise generated between those involved; the services performed do not involve counseling or promotion of a business arrangement that violates state or federal law.

Sale of practice

If you are selling your practice you may make payments to the physician who is buying the practice as long as the period from the date of the first agreement pertaining to the sale is not more than one year; and you will not be in a professional position to make referrals to, or otherwise generate business for, the purchasing physician.

Referral services

You may pay an individual or entity for referral services as long as that service does not exclude as a participant any individual or entity who meets qualifications for participation; any payment the participant makes is assessed equally against and collected equally from all participants and is only based on the cost of operating the referral service, not on the volume or value of referrals or business otherwise generated by the participants; the referral service imposes no requirements on the manner in which the participant provides services to a referred person; the service makes certain disclosures to a person seeking a referral, with each disclosure maintained by the service in a written record certifying the disclosure.

Warranties

You may pay or exchange anything of value under a warranty provided by a manufacturer or supplier of an item to the buyer as long as the regulatory standards (too numerous to mention here) are followed.

Discounts

You may receive discounts on goods or services received by a buyer as long as you and the seller comply with the strict standards enumerated in the regulations.

Employees

You may pay an employee for employment in furnishing an item or service for which payment may be made in whole or part under Medicare.

Group purchasing organizations

A group purchasing organization may receive payment from vendors as long as the group has a written agreement with each individual or entity for the items or services furnished; and the agreement states that the participating vendors will purchase goods or services and will pay a fee to the group of 3% or less of the purchase price of the goods or services provided by that vendor.

Waiver of beneficiary, co-insurance and deductible amounts

You may reduce or waive Medicare or state healthcare program beneficiaries' obligation to pay co-insurance or deductible amounts as long as these amounts either (1) are owed to a hospital for inpatient hospital services for which Medicare pays under the prospective hospital system or (2) are owed by an individual who qualifies for state subsidized services.

This article cannot detail all the specific standards set forth in the regulations. For more information, please contact the General Counsel at (800) 722-1350.



DNR approval spreads

As you'll note from the map, the western part of North Carolina is rapidly filling up with counties that have endorsed the out-of-hospital do not resuscitate order recently produced by the NCMS's Bioethics Committee and approved by the Attorney General's office. At press time, the following 48 county emergency medical services systems had prepared their internal policies and procedures and were willing to honor the properly executed DNR form by the bedside of patients dying in their homes:

Alamance, Alleghany, Ashe, Avery, Buncombe, Burke, Cabarrus, Caldwell, Camden, Catawba, Cherokee, Clay, Cleveland, Cumberland, Currituck, Dare, Davie, Durham, Forsyth, Gaston, Gates, Guilford, Haywood, Henderson, Iredell, Lincoln, Macon, Madison, Mecklenburg, Mitchell, Moore, Nash, Onslow, Pasquotank, Perquimans, Pitt, Polk, Rockingham, Rowan, Surry, Wake, Warren, Watauga, Wayne, Wilkes, Wilson, Yadkin, Yancey.

Doctors who wish copies of the DNR form for their own patients living in those counties or for hospices, nursing homes or home health agencies with which they are affiliated may receive copies from the NCMS simply by writing and requesting 25 copies. When additional forms are needed, we must receive another request in writing. Each patient must have an original DNR form by the bedside; EMTs will not honor a photocopy.

Contact a colleague

There is no better person than YOU to promote and encourage membership to nonmember physicians. As a member you know what the Society has accomplished and is doing on behalf of all physicians and their patients. You also know that increased support, both financially and politically, will multiply our strengths.

The Membership Committee has been involved in an outreach program to increase membership and now needs your help in making contacts. They have names of potential members who need a personal contact from a member physician.

If every member would agree to contact three potential members and let them know about some of our activities— our committee work, resolutions, legislative victories—we would certainly send a message of positive action across this state.

Delegates and Alternate Delegates to the Annual Meeting are especially encouraged to join the program. They can pick up three contact cards at the Membership booth at this year's Annual Meeting. To find out more about the program and to be provided with names of physicians in your area please contact Deanna Goodwin at (800) 722-1350.

HIV testing okayed for occupational exposure

Effective December 1, 1991, you may test for HIV, without informed consent, any patient whose blood or body fluids have posed a significant risk of HIV transmission to a healthcare worker. The test is ordered by the attending physician of the person who has been the source of the exposure. On August 29 the North Carolina Health Services Commission adopted a regulation to facilitate testing of patients for HIV when a healthcare worker may have been exposed to the virus.



The amended regulation eliminates current requirements that the patient be at high risk for HIV infection, that he give his permission for testing and that the local health director order a test if the patient refuses to give permission.

The Commission's action fulfills a request of the 1990 NCMS House of Delegates, which adopted a resolution calling for elimination of the informed consent requirement for HIV testing in cases in which a healthcare worker may have had an occupational exposure to the virus. The NCMS staff, which orchestrated an active lobbying campaign in favor of the proposed regulation, extends its special thanks to the following physicians and local medical society representatives who testified in favor of the new rule: James T. Robinson, Forsyth-Stokes-Davie Medical Society Executive Director; Richard L. Rumley, MD; Michael W. McManus, Buncombe County Medical Society Executive Director; Bertram W. Coffer, MD; Kathleen M. Whalen, Pitt County Medical Society Executive Administrator; Robert W. Youngblood, MD; and Philip C. Davis, MD, Buncombe County Medical Society President.

Special appreciation also goes to the NCMS physicians who personally contacted each member of the Health Services Commission to urge adoption of the new rule.

Other existing requirements were only slightly modified. You are encouraged to familiarize yourself with related HIV-related laws and regulations and to consult your attorney for advice, as necessary. The Medical Society distributed "HIV Information for Physicians Offices" kits in February 1990. Updated information is currently being developed by the Sexually Transmitted Diseases & AIDS Committee.

President's message



Edwin W. Monroe

Edwin W. Monroe, MD
President

In this next-to-last monthly message as your President, I wish to highlight two important activities among the many that deserve your attention and understanding. First and foremost is our 137th Annual Meeting in Asheville November 6-10.

This Annual Meeting will offer some very interesting and informative activities. On Friday, Barry Eisenberg, Director of Health Programs for the AMA, will give us an update on the status of RBRVS. Medicine's success in halting HCFA's attempt to impose a 16 percent decrease in reimbursement does not mean our efforts to keep the pressure on HCFA are over; we must continue to be heard. Another key event at this year's meeting will be an address by Dr. Daniel H. Johnson, Jr, MD, Speaker of the AMA House of Delegates.

Our House of Delegates will consider a number of interesting and challenging matters such as a recommendation to designate certain services as essential for inclusion in all plans of medical coverage. Other issues include discounting dues for new members just out of residency training, permitting direct membership in the Society and many other important concerns.

The second activity emphasized in this Message is the study of the future of our *Journal* which was stimulated by the decision of Dr. Eugene A. Stead, Jr, to retire at the end of 1991 after a highly successful eight year tenure as Editor. This study, called for by the Planning Council and Executive Council, focused on a critical review of our two print publications, the *Journal* and the *Bulletin*, and their effectiveness in meeting the information needs, scientific and otherwise, of our members. A survey was supplied to all members in August and 865 responses were received—a record return.

A majority of those responding favor expanding the *Journal* to include articles on subjects such as medical-legal issues, risk management, Medicare, bioethics, legislative issues and third party payors—issues that affect the broad spectrum of our membership. Each of these topic areas was ranked higher than any of the current sections in the *Journal*.

In view of the aforementioned survey results and after evaluating printing costs of the *Bulletin* and personnel costs associated with the *Journal* and the *Bulletin*, the Executive Council has decided to consolidate the managing editor function of the *Journal* back into the Communications Department of the Society. They have also asked the Editor and the Editorial Board of the *Journal* to incorporate the content of the *Bulletin* into an expanded *Journal*. These changes, when accomplished, will not diminish the authority of the Editor and the Editorial Board nor will they denigrate the scientific content of the *Journal*. They will save at least $70,000 in printing and personnel costs. The heir apparent to the position of Editor, Dr. Francis A. Neelon of Duke, has expressed his willingness to give these changes an adequate trial to determine their positive or negative impact.

I hope to see you in Asheville.

This law affects many doctors' offices

Effective July 26, 1992 employers with 25 or more employees will be subject to the Equal Employment Opportunity Commission's final regulations implementing the Americans with Disabilities Act (ADA). Two years later (July 26, 1994), employers with 15 to 24 employees will be brought on board. The ADA prohibits employment discrimination based upon an individual's disability. NCMS members need to be aware of these regulations since many of you with 15+ employees will now fall under them.

Covered under the regulations are disabilities that include physiological, mental or psychological disorders or conditions that substantially limit an individual from performing tasks such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning or working. Among those ***not*** considered disabled are individuals with sexual behavior disorders, compulsive gamblers, kleptomaniacs, pyromaniacs, homosexuals and bisexuals, expectant mothers, those with characteristic predisposition to disease or illness and those currently using illegal drugs.

Under ADA, you may not discriminate against a qualified disabled person who can perform the essential functions of a job. This simply means that you cannot reject as unqualified an individual applying for a particular job because the individual is disabled. You must make reasonable accommodation for the employee, and the regulations offer some guidance as what this may be. You may only refuse disabled individuals employment opportunities when you can establish that even with reasonable accommodation they cannot perform the job. Steps are provided in the regulations to help determine whether an individual is qualified for employment as well as what you must do so the disabled person can enjoy equal employment opportunities.

Undue hardship is a defense to discrimination charges under the regulations. Undue hardship means any unduly, costly, extensive, substantial or disruptive alteration in business practices that would fundamentally alter the nature or expenses of the facilities' operations. Factors are listed that you should consider in determining whether a certain accommodation would be an undue hardship.

Important to healthcare providers is a section of the regulations that says you are not required to hire any individual who poses a "direct threat" to the health and safety of others. You must determine if the threat can be eliminated or the risk reduced to an acceptable level, and you may only refuse to hire an applicant or discharge an employee if the risk cannot be lowered with reasonable accommodation. A direct threat must be determined objectively using the following factors:

1. duration of the risk,
2. nature and severity of the risk,
3. likelihood the harm will occur,
4. imminence of the potential harm.

(See Law page 12)

Carolina Casualty—trucks not people!

We recently received a call from Carolina Casualty Insurance Company in Jacksonville, Florida. They have received a number of health insurance claims from physicians in North Carolina.

This company cannot process these claims for payment because they do not have a health insurance product. They insure long-haul trucking.

If your patients list Carolina Casualty Insurance Company as their health insurance, investigate further. Payment of claims will be delayed since Carolina Casualty will simply write back to you explaining that they cannot pay health insurance claims.

If your practice is experiencing a problem with patients having Carolina Casualty as a health insurance carrier you may wish to report this to the North Carolina Department of Insurance at 430 North Salisbury Street, Raleigh, NC 27603-5908 or call (919) 733-7434.

Law

(Continued from page 11)

Other sections of the regulations are devoted to public accommodations and standards for accessibility by your clientele. If your practice is now covered by the ADA, make sure you get a copy of these regulations and that you review them with competent legal counsel. For more information, call the Medical Society's General Counsel at (800) 722-1350.

Deceased physicians

Donald Henderson Eckles, 85, Hendersonville
Robert Charles Fincher, Jr, 70, High Point
Cyrus Leighton Gray, Jr, 78, High Point
Modesto Scharyj, 71, Winston-Salem
Warner Lee Wells, 77, Chapel Hill

Fifty year club

In 1953 the North Carolina Medical Society's House of Delegates authorized the Executive Council to establish a special recognition for member physicians in North Carolina who have practiced medicine for fifty years. Below are those physicians who have achieved this milestone in 1991.

Beverly Weller Armstrong, Charlotte
John Francis Barber, Asheville
Ralph Monroe Bell, Waxhaw
Roy Stinson Bigham, Jr, Charlotte
Kyle Emerson Black, Salisbury
Alan Reid Brown, Sebring, FL
James Walter Brown, Jr, Concord
Jesse Caldwell, Jr, Gastonia
Edward Hays Camp, Waynesville
William Lowe Clarke, Jr, Hickory
Gilbeart Hooper Collings, Jr, Ft. Myers, FL
Almon Rufus Cross, High Point
Fletcher I. Dorsett, Winston-Salem
John Munroe Douglas, Charlotte
William Fox Eckert, Cramerton
Ernest Woodrow Fisher, Franklin
Benjamin Fletcher Fortune, Greensboro
Monroe Taylor Gilmour, Charlotte
Hubert Benbury Haywood, Jr, Raleigh
William Gray Hollister, Chapel Hill
Cary Frederick Irons, Jr, Greenville
Malene Grant Irons, Greenville
Marvin Nicholas Lymberis, Charlotte
William Thompson MacLaughlin, Conover
Oscar Lee McFadyen, Fayetteville
Walter H. Miller, Jr, Goldsboro
Ralph Siler Morgan, Webster
Charles Bradley Norris, Charlotte
Joseph B. Parker, Jr, Durham
Luke Walter Query, Jr, Asheboro
Edwin Albert Rasberry, Jr, Wilson
James Slade Rhodes, Jr, Williamston
Donald MacConnell Ross, Burlington
Torben Seear, Gastonia
Edwin Lincoln Seigman, Rocky Mount
Louis deS. Shaffner, Winston-Salem
Charles Lewis Spurr, Winston-Salem
Howard Paul Steiger, Pawleys Island, SC
Charles Woodrow Stryon, Raleigh
Edwin Hale Thornhill, Raleigh
Thomas Gardiner Thurston, II, Salisbury
Larry Turner, Durham
Warner Lee Wells, Chapel Hill
Clayton Eugene Wheeler, Jr, Chapel Hill
Raboteau T. Wilder, Southern Pines
Joseph Thomas Wyche, Whiteville

Coastal Calls

WWAY-TV Health Hotline

This past summer our friends at WWAY-TV in Wilmington hosted the first Health Hotline for the folks in southeastern North Carolina. It was an unqualified success with seventy-one area physicians answering over 1000 calls for twelve hours. The WWAY program reached a television market of 12 counties in North Carolina and several more in South Carolina. During the course of the day two hours of live programming were devoted to interviews with Medical Society members on such topics as heart attacks, childhood diseases and skin problems.

The following is a list of the physicians from the WWAY-TV area who gave two hours to respond to the questions called in by the public. Our thanks to them for making the program the success it was.

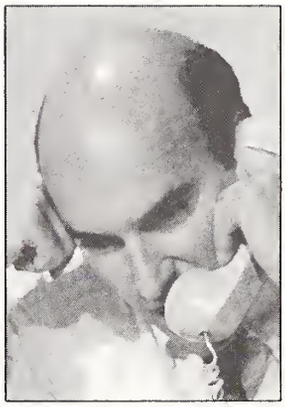
Richard Tamisiea
Shirish Devasthali
S. E. Warshauer
Henry Temple, Jr
Brent Wright
Molly V. Allen
Kevin Scully
Julie Orli
Michael J. Donahue
Dennis B.Nicks
Robert Solomon
Marc A. Melser
Scott W. Visser
Bertram R.Williams, Jr
David R Miles
John Pasquariello
Bernard Gottschalk
John W. Anagnost
Robert Jones
Abdulaziz Khakee
John A. Ewing
Melvin E. Watson
Ken White
Rebecca McAfee
Glenn P. Moradian
John Pace
Alfred Woodworth
Paul C. Whitesides
Carl Rust, II
Ronald S. Mukamal
H. W. Gillen
Ernest H. Brown, Jr
James L. Kesler
James R. Dineen
Eugene J. McMurry, Jr
John R. Krohn
Ivan David
Harry Van Velsor
Ferrell W Shuford, Jr
Hormoze Goudarzi
John D. Hunter
Murray K. Seidel
Kenny Morris
Donald M. MacQueen
Charles Hunter
Robert A. Parr
Shyam Garg
Van Nynatten
Theodore Swirat
Thomas Maloy
David A. Esposito
Dan Patterson
Ralph B. Moore
John W. Lovett
Chris Whitten
Stephen Smith
Mary Lou Courregé
Arlyn Moeller
Joseph W. Kittinger
Thomas Clancy
Ellis A. Tinsley, Sr
Robert J. Anderson,
Jeffrey E. Harris
Christopher P. Fleming
Byron A. Stratas
Mark D. Foster
Luke Sampson
Daniel Gottovi
Jody Codington
Clayton Callaway
Gordon Coleman



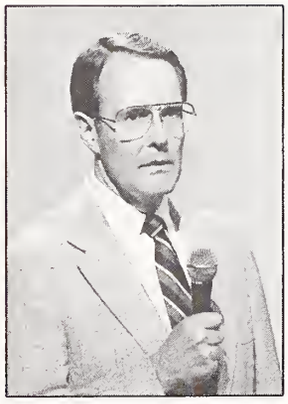
Dr. Mary Forehand (right) discusses childhood illnesses with WWAY-TV reporter Stephanie Loftus.



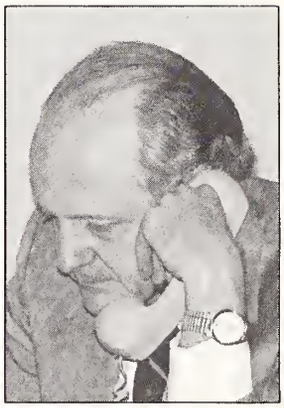
Phoneline at WWAY-TV



Glenn P. Moradian



Michael J. Donahue



Luke Sampson



Molly V. Allen

Calendar...

October 10 **Communicating and Evaluating Hazardous Exposure in the Clinical Setting** at the Area Health Education Center offices in Charlotte. Contact Cherylle Beal at (919) 733-4984.

October 17 **Communicating and Evaluating Hazardous Exposure in the Clinical Setting** at the Area Health Education Center offices in Greenville. Contact Cherylle Beal at (919) 733-4984.

October 22-24 **Aging and Health: The Community Connection** at the Charlotte Marriott City Center, Charlotte. Contact Wayne White at (919) 733-3983.

November 6-10 **North Carolina Medical Society's 137th Annual Meeting** at the Grove Park Inn, Asheville. Contact Alan Skipper at (800) 722-1350.

November 7 **Health Cost Management for NC Employers—Strategies for the 90s** at the Omni Hotel in Chapel Hill. Contact Kathy Higgins or David Abernathy at (919) 490-4104 or (919) 490-4264.

November 14 **NCACS Cancer Symposium** at East Carolina School of Medicine, Greenville. Contact Don Lannin at (919) 551-5418.

November 16 **Osteoporosis: Diagnosis and Treatment in the 1990s** at the Radisson Plaza Hotel in Charlotte. Sponsored by the Arthritis Foundation, North Carolina Chapter. Contact Joyce Scull at (704) 535-8303.

November 18 **RBRVS How to Work With It** at the Sheraton Hotel and Marina, New Bern. Contact Aileen Best at (800) 722-1350.

November 19 **RBRVS How to Work With It** at the Marriott RTP in Morrisville. Contact Aileen Best at (800) 722-1350.

November 20 **RBRVS How to Work With It** at the Holiday Inn in Hickory. Contact Aileen Best at (800) 722-1350.

November 21 **RBRVS How to Work With It** at the Stouffer Winston Plaza Hotel in Winston-Salem. Contact Aileen Best at (800) 722-1350.

November 22-24 **NC Academy of Family Physicians, Winter Family Physicians Weekend** at the Grove Park Inn, Ashevelle. Approved for 14 AAFP prescribed credit. Contact Joan White at (800) 872-9482.

December 11 **Durham-Orange Medical Society Meeting** to honor community health professionals who served during Operation Desert Storm. Contact Jerry Nance at (919) 383-2602.

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